SOUTHERN PACIFIC COMPANY

WESTERN DIVISION SPECIAL INSTRUCTIONS

No. 1

EFFECTIVE SUNDAY, JANUARY 23, 1949
AT 12:01 A. M.,
PACIFIC STANDARD TIME

THESE INSTRUCTIONS CONSTITUTE A PART OF THE TIMETABLE CURRENTLY IN EFFECT

R. E. HALLAWELL,
General Manager.

V. M. PETTERSON,
H. R. HUGHES,
Assistant General Managers.

C. H. GRANT,
General Superintendent of Transportation.

A. S. McCANN,
Superintendent of Transportation.

E. D. MOODY,
Superintendent.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

RULE A. All, or portions of, the following rules have been changed. Pasters have been printed covering these changes, and employes must have the pasters in their copy of Book of Rules:

Rules 10 (H)
15
26
99
104 (D)
210
221
271
295
297
705
707
708
763
837

Definition of FIXED SIGNAL is changed to read as follows:

"A signal of fixed location indicating a condition affecting the movement of a train, such as train-order, automatic, interlocking or absolute signal; switch, stop boards, yard limit boards or speed boards."

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

RULE 2 (A). Watches subject to inspection must be presented monthly between first and fifteenth, instead of semi-monthly, to a designated inspector.

RULE 10 (J) is revised to read as follows:

"Speed boards will be located to the right of track in direction of approach where practicable, except on double track where trains keep to the left, they will be located to the left if proximity of adjoining main track prevents location to the right.

Speed boards that prescribe reduction in speed will be located three-fourths mile from initial point of restriction. Speed boards that authorize an increase in speed will be located at the point where higher speed is permissible, and speed may be increased accordingly as soon as rear of train has passed the speed board.

(no change in Figs. 1, 2 and 3)

The higher number on speed board indicates the maximum speed of trains consisting entirely of passenger equipment, and the lower number indicates the maximum speed of all other trains. Where but one number is shown it indicates the maximum speed of all trains.

Round yellow speed boards indicate by black figures the maximum speed of certain passenger trains designated by special instructions in the timetable or by timetable bulletin; speed indicated by oval white speed boards applies to those trains unless a round yellow speed board is displayed on same post below the oval speed board.

Certain speed boards have the word "SIGNAL" above the figures. Such speed boards in approach to a distant signal indicate the speed that must not be exceeded while engine is passing the distant signal three-fourths mile beyond the speed board, unless distant signal can plainly be seen to be displaying proceed indication; and such speed boards in approach to a home signal indicate the speed that must not be exceeded while approaching the home signal three-fourths mile beyond the speed board, until indication of home signal can plainly be seen. The word "SIGNAL" on an oval speed board also applies to a round yellow speed board if displayed on the same post."

RULE 17. Oscillating white light on engines so equipped is to be operated in addition to headlight, when engine is moving at night, and in foggy or stormy weather by day. It must be extinguished approaching passenger stations.

Oscillating red light on engines so equipped shall be operated by day or night, only when a train has stopped, or is stopping, under circumstances that may cause an adjacent track to be fouled, and will not in any way relieve trainmen and enginemen from compliance with Rules 99 and 102. A train or engine on adjacent track must stop at once, and may proceed only after ascertaining that track is safe for passage of trains.

RULES 17, 17 (B), 17 (C), and S-17. Headlight will be displayed by day on all passenger and freight trains as an aid to motorists. When so displayed, the provisions of Rules 17, 17 (B), 17 (C) and S-17 will not apply unless other conditions require.

RULE 28. In double track territory signals will be placed to right of track according to direction of movement of train to be flagged. Trains in opposite direction will not be required to observe signals so placed.

RULE 98. Cars must not be kicked or shoved over railroad crossings not protected by interlocking, unless movement is properly protected.

RULE 99 (C). Will apply on Berenda, Chowchilla, Ione, Lodi, Oakdale and Winters Branches; on Napa Branch between Napa and Calistoga, and on San Ramon Branch.

RULE 102. Yard engines must have two red flags and two red lamps for use in complying with this rule. If taken from engine they must be replaced after use.

RULE 103 (A). No train, engine, motor or car shal be operated over any crossing where special signs appear, reading:

STOP—FLAG HIGHWAY TRAFFIC, or
CAUTION—FLAG HIGHWAY TRAFFIC

unless same be first brought to a stop or caution observed (as indicated by sign) and traffic on crossing protected by member of train crew or other competent employe acting as flagman.

RULE 107. Freight trains and engines must avoid passing between stations and loading tracks when passenger trains are closely approaching from opposite direction on double track, and care must be exercised by non-stopping passenger trains when approaching stations at about the same time that other passenger trains are approaching from the opposite direction. When practicable non-stopping trains are to be given preference, but each train must be operated in a manner to avoid confusion and hazard of personal injury.

RULE 221. Within block system limits only, third an sixth paragraphs of Rule 221 are modified to the extent that will no longer be necessary for train to obtain clearance if train-order signal at an open train-order office is first seen in proceed position.

If no orders are held for trains from the same direction, or if orders held are for trains originating only, the operator may clear the signal before train reaches such view-point.

Also, within block system limits only, signal may cleared for a first-class train for which there are no orders, whe orders are held for another train from the same direction, provided such orders do not restrict the train addressed at that station, and further provided that permission is first obtained from train dispatcher. Such permission must not be given if the train to which orders are addressed has passed the last open train-order office.

RULE 281B. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route," Figs. 1 and 2, must be made with caution.

RULES 281 and 281D. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. 5, Rule 281; or by light type dwarf signals displaying "Proceed Prepared to Stop at Next Home Signal", Fig. 7, Rule 281D, must be made with caution, and position of switches observed.

RULE 505. AUTOMATIC BLOCK SYSTEM

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until switch indicator indicates block clear on opposite track. Within C.T.C. limits dispatcher's permission must also be obtained before lock box door is opened.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked, after which lock box door must be closed and locked. Within C.T.C. limits dispatcher must also be notified by telephone when completed.

When switch indicators indicate "block occupied", instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Emergency lock release to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, dispatcher must be notified immediately, and movement made only after flag protection provided on both tracks.

Low type electric locks, such as are applied direct to lever of hub type switch stands, function as above except that the removal of the switch padlock has the same effect as opening the lock box door. Instead of being equipped with an "unlocked" indicator, these locks have a pilot light that indicates by illumination when the lock is unlocked.

When pilot light will not illuminate to indicate electric lock is unlocked, push button on adjacent cast iron box, protected with cover and locked with switch padlock, should be depressed to illuminate green light. After a time interval of from one to seven minutes pilot light on electric lock will be illuminated, indicating lock is unlocked.

MECHANICAL SWITCH LOCKS

After lock box door is opened lock lever may be moved upward against stop. After a time interval of from one to seven minutes indicator will show UNLOCKED and lever may be moved to reverse position "R". Switch may then be operated in usual manner.

Lock lever must not be returned to normal position "N" until all movements over the switch are completed, switch returned to normal position and locked.

If mechanical lock fails to release, notify dispatcher immediately if means of communication available.

RULE 535. SPRING SWITCHES

Maximum speed for trailing movement when the spring is to be actuated, and maximum speed for facing movement with switch points in normal position, as indicated in speed restrictions tables must not be exceeded.

A spring switch with facing point lock must not be trailed through unless switch target displays the letters "SS" in normal position, or switch has been lined for the movement.

When a signal with triangular plate protecting a spring switch with facing point lock displays stop indication, member of crew must open and close spring switch by hand, removing any obstruction. If signal does not then display proceed indication, switch must be hand thrown for the movement.

When a spring switch or spring derail is hand thrown, trainman so setting same must again set it for normal position after movement has been completed, unless he has arranged for another trainman to do so.

RULE 536. Wheels of tenders must not be considered as engine wheels.

RULE 605. INTERLOCKING

Trains and engines must not enter main track within interlocking limits where no signal governs such movement until permission has been obtained from signal operator, and must then run with caution not exceeding 12 MPH to the next signal.

Movements governed by short-arm or dwarf signals must be made with caution and position of switches observed, as such signals govern movements for various routes.

At all interlockings, when route lined is not to be used, following signal will be sounded by engineers: o o — o o.

GENERAL REGULATIONS

RULE 822. Only one man at a time is permitted to ride on pilot or leading footboard of any engine in direction of movement.

Riding on leading footboard or pilot step of engine when passing over highways, crossings or on streets is forbidden.

RULE 825. Fifth paragraph applies to wooden outfit cars the same as to other cars, except that diner should not be separated from kitchen car.

RULE 826. When a sign reading "Occupied Outfit Cars" is attached to switch lock, the outfit cars must not be coupled to, nor moved, until occupants have been notified, and permission given by foreman or his representative.

RULE 827. TRAIN INSPECTION

Trains, including military trains, made up in part of freight cars or caboose equipped with cast iron wheels are required to comply with rules and timetable instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

Cars bearing placards denoting contents are explosive, inflammable, poisonous, or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

On freight trains, when conditions are favorable and in judgment of conductor it is safe, run may be made without stopping for inspection from one water stop to next water stop, except that a distance of seventy (70) miles must not be exceeded between inspections.

RULE 831 is revised to read as follows:

"Occupied wooden frame outfit cars must be placed next ahead of passenger cars if handled in mixed trains, or next ahead of caboose if handled in freight trains.

"Women and children must not be permitted to ride in outfit cars when moved by freight train. Other occupants of outfit cars must remain inside and not ride on top, sides or between these and other cars during course of road or yard movements."

RULE 832. Wooden underframe cars of any class must be placed next ahead of caboose, except that when handled in the same train with wooden frame outfit cars they must be placed next ahead of the outfit cars.

RULE 849. Steam valve on Pullman troop sleepers cannot be opened while train is in motion, and when such car is on rear of train steam line must not be cut in any portion of train until valve is closed on the car on each side of coupling to be opened, to avoid burning by steam.

RULE 851. When necessary to discharge passengers on left side of train on double track, trainmen must caution passengers that trains may approach on opposite track, and use precaution to avoid injury.

RULE 873. Sanders must not be operated within 150 feet of any power operated switch.

AIR BRAKE RULES

RULE 9. Passenger trains of more than 25 cars must be handled under freight train rules.

MISCELLANEOUS

4. Helper service:

No helper engine will be placed behind wooden underframe cars or cabooses.

Engines weighing more than 235,000 pounds on drivers will not be placed behind steel underframe cabooses.

In no case will more than one helper engine be placed behind steel underframe cabooses.

Except as provided below, one helper may be placed on head-end, except that not more than one AC class engine, nor more than two engines of other classes may be placed on head-end of any freight train. When additional helpers are required, they will be placed back in train and cut in ahead of any cars of wooden frame construction, and when practicable should be placed behind a loaded car.

Helper or doubleheader engines must not be placed on head-end of trains powered by DEF class engines.

Westward between Tracy and Niles if train consists of more than 49 cars, and eastward if train consists of more than 75 cars when only one helper is required it will be placed on rear ahead of caboose and any wooden frame cars, and when practicable should be placed behind a loaded car.

Where coupling of engines is not permitted, such engines must be separated by at least ten cars.

Air will be cut in all helper engines, and engine must not be cut off when train is in motion.

When used as helpers, AC or MM class engines must not be coupled together, nor may more than two F, Mt, or heavier class be coupled together. When coupled in rear of train, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades, road engine and helper must not be cut off from train at the same time without hand brakes being securly set.

4 (a). Pushing trains out of yards:

No engine will be placed behind a wooden underframe caboose or other wooden frame equipment.

Engines weighing more than 235,000 pounds on drivers will not be placed behind steel underframe cabooses.

Air will not be coupled through pusher engine, except when pushing trains between Port Costa and Bahia, air must be coupled through pusher engine. Eastward trains must stop with rear of train clear of Bridge zone limits, 800 feet east of draw span, to cut pusher engine off.

Other yard engines regularly so used will be equipped with Russell-Jordan device to hold coupler pin from dropping, thus making it unnecessary for employes to uncouple pusher engine when cutting off.

In no case shall knuckle be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

5. Oscillating red light on rear of trains so equipped is to be operated by day and night whenever train reduces speed to such an extent that it may be overtaken by another train; while train is standing; and until train again resumes normal speed.

When backing a train so equipped, stationary white light is to be displayed in this unit as a headlight, by opening the door in which red lens is located, and locking it back; and setting the switches accordingly.

Trainmen and enginemen must familiarize themselves with instructions governing operation of these lights. They do not in any way relieve trainmen or enginemen from compliance with the rules governing observance of block signals; providing proper flag protection, or display of markers.

25. Electric lamps may be used for displaying white light only, except that yardmen may use green light in giving signals to train entering or leaving yard tracks during night hours.

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
DEP-3, 4	95	70	30
DEP-5, 6	90	70	30
GS	75	45	30
Mt	75	45	30
P-7, 8, 10, 12	75	45	30
A	70	45	30
DEF-1 (6100 to 6118)	65	50	30
E	65	45	30
P-1, 3, 4, 5, 6, 11	65	45	30
T-26, 32, 37, 40	60	40	30
AC-4, 5, 6, 7, 8, 9, 10, 11, 12	60	40	25
DEF-2, 3	55	50	30
DERS-1, 2	50	40	40
I	50	35	25
T-1, 8, 9, 23, 28, 31, 57, 58	50	35	30
Mk-5, 6, 7, 8, 9	50	40	30
F	50	40	30
SP	50	35	30
B	50	35	30
DES-1 to 7, 100 to 109	40	40	40
DERS-200	40	40	40
-2, 4, 5, 8, 9, 10, 18, 19, 26, 27, 28, 29	40	35	30
TW	40	30	30
Mk-2, 4	40	30	30
AC-1, 2, 3	40	30	25
C-15, 17	35	30	30
Mk-10, 11	35	30	30
MM	35	30	25
DES-200	30	30	30
S	20	20	20
SE	20	20	20
Any engine not listed	35	35	25

Steam or Diesel-electric engines backing must not exceed 20 MPH on all curves, and when approaching highway crossings at grade.

Diesel-electric engines hauled in train must not be moved at speed greater than that shown for the Diesel-electric engine running forward light.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Engines with tenders having water capacity of 7,000 gallons or less, except classes 70-R-1 and 70-SC-1, must not exceed 0 MPH.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers	20 MPH
When all weight has been removed from only one wheel of any pair of drivers	30 MPH
When engine truck is removed	20 MPH
When main rod only is removed	30 MPH
When side rod only is removed	30 MPH
When both main and side rods are removed	20 MPH
When hauled in train with all rods on	30 MPH

Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine or equipment is to be moved. Such engine or equipment must not be handled in train until train-order designating maximum speed is issued.

When train-order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH
Trains handling wooden pile-drivers; locomotive cranes with boom disconnected and heavy end forward; steam shovels and ditchers transported on their own wheels; and car-top ditchers when blocking and tie-down cables are removed:	
On tangent main tracks, except:	35
SPMW 4044	25
On tangent branch tracks	25
On all curves 5 MPH less than speed authorized. Where speed boards in place, 5 MPH less than shown on speed boards, except where speed indicated is 15 MPH or less be governed by speed boards.	
Trains handling locomotive cranes with boom disconnected and light end forward (must not be handled in this manner except in emergency):	
On tangent main tracks	20
On curves and on branch tracks	15
Trains handling locomotive cranes with boom in place, either end forward (to be handled in work train when practicable):	
On tangent main tracks	25
On curves and on branch tracks	15
Trains handling steel pile-drivers	40
Trains handling relief outfit with steam derrick:	
On tangent main tracks	35
On tangent branch tracks, except:	25
Nos. 7000 and 7010 on San Ramon Branch	10
Nos. 7000 and 7010 must not operate between Larkmead and Calistoga on Napa Branch.	
Nos. 7000 and 7010 must not operate between Edwin and Ione on Ione Branch unless authorized by Superintendent. If movement authorized, speed of 15 MPH must not be exceeded.	
Nos. 7014 and 7025 must not operate on any branch except Schellville Branch; Napa Branch between Suisun-Fairfield and Napa River Bridge 45.62 at Napa; and on Vallejo Branch between Napa Jct. and MP 30.6.	
On all curves, 5 MPH less than speed authorized. Where speed boards in place, 5 MPH less than shown on speed boards, except where speed indicated is 15 MPH or less be governed by speed boards.	

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels.

Passenger trains handling steel wheel baggage-express cars in series 5810 to 5874, and foreign line steel wheel cars not equipped with high speed trucks, must not exceed 60 MPH.

When foreign line steel wheel cars are picked up at points where car inspectors are not on duty, conductor must contact train dispatcher as to applicable speed restriction governing movement.

Wooden equipment must not be handled in regular passenger trains. Extra passenger trains handling wooden coaches or chair cars must not exceed 40 MPH. If consist of train includes both wooden and steel passenger carrying cars, the wooden cars must be kept together and handled on rear.

Handling of freight cars in trains behind passenger cars is prohibited except passenger equipment may be placed in head-end of mixed trains when carrying personnel and equipment in connection with military and naval movements. This does not refer to a baggage, express, or mail car, or a caboose.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them, except between Oakland Pier and Pittsburg.

Trains pushing or backing passenger equipment must not exceed 15 MPH.

The following cars will be considered streamlined equipment: 2920, 4119, 5065 to 5070, 5123 to 5125, 5127 to 5138, 5161 to 5163, 6029, 6204, 6448, 10144, 10149 and 10156.

Maximum speed of deadhead equipment or passenger trains with standard caboose is 50 MPH.

Trains consisting of steam or Diesel-electric engine and caboose only must not exceed speed permitted for engines of that class running forward light; such trains must not, in any case, exceed 40 MPH.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RULE 10 (J). Round yellow speed boards indicate by black figures the speed restrictions applying to Diesel-powered Streamliner CITY OF SAN FRANCISCO.

RULE 11 (A). Lighted fusees must not be left burning on Suisun Bay bridge.

RULE 14 (d). As specified below, — — — — o will be indication that flagman may return from west as prescribed by Rule 99:

Martinez	Trains on Tracy line.

RULE 14 (e). As specified below, — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Martinez	Trains on Tracy line,
Napa Jct.	Trains on Schellville line,
Suisun-Fairfield	Trains on Napa Jct. line,
Davis	Trains on Woodland line.

RULE 14 (l). Whistle must be sounded on westward trains immediately on emerging from Tunnel 2 at Selby and Tunnel 1 at Oleum.

RULE 14 (m). Whistle will not be sounded one mile before reaching stations between Oakland Pier and San Pablo.

RULES 17 and 17 (C). Headlights of engines standing at end of wharf at Oakland Pier must be extinguished when steamers are entering slip. Headlights of eastward trains must be extinguished while standing at Oakland Pier and dimmed until Oakland Pier Tower has been passed.

RULE 21 (C). Passenger engines to handle trains from Oakland Pier may display indicators before leaving West Oakland.

Indicators of engines on trains arriving Oakland Pier may be displayed until engine reaches roundhouse at West Oakland, and must be removed immediately on arrival at delivery track.

RULE 30. Between the hours of 9:00 PM and 6:00 AM engine bell must not be rung, except in emergency, in city limits of Napa.

RULE 93. When freight cars are moved from one point to another on main track within Oakland yard limits at night, a red light must be displayed on rear of rear car.

Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	“ (Niles line)	15.82
	“ (Alvarado line)	14.01
27.97	Port Costa	39.24
	“ (Benicia spur)	End track
	“ (Tracy line)	37.08
47.05	Suisun-Fairfield	52.45
	“ (Napa Jct. line)	45.75
74.20	Davis	77.37
	“ (Tehama line)	77.39
85.51	Sacramento	95.35
131.60	“ (Stockton line)	136.33
37.50	Avon	38.90
	“ (San Ramon Branch)	39.35
39.53	Port Chicago	42.93
46.31	Pittsburg	51.68
61.00	Brentwood	62.70
80.70	Tracy (Martinez-Los Banos line)	85.64
69.19	“ (Niles-Lathrop line)	74.37
39.14	Napa Jct. (Creston-Calistoga line)	38.21
	“ (Schellville line)	38.86
	“ (Vallejo line)	36.37
44.34	Napa	46.46
70.82	Calistoga	End track
47.72	Schellville (Lombard-Ignacio line)	38.94
	“ (Sonoma line)	49.70
31.81	Vallejo	End track
75.00	Winters	78.00

RULE 98. Railroad crossings at grade not interlocked: Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Benicia: Government Ry., crossing of Benicia spur near Benicia arsenal. If Signal 340 or 341 displays stop indication, flag protection must be provided on intersecting track before movement made over crossing.

Napa Jct.: Big balloon track crossing of Calistoga-Vallejo main track. Schellville line trains using big balloon track need not stop.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Napa Jct.: Calistoga-Vallejo main track crossing of big balloon track. Calistoga-Vallejo line trains must stop.

Las Juntas: SNRy, crossing of San Ramon Branch.

RULE 103 (A). When any of the crossovers are used in vicinity of MP 11, switches must not be left open longer than necessary to complete move, as automatic crossing gates at Buchanan St., Albany, will remain down as long as one of these switches is open.

Suisun-Fairfield: When necessary for freight trains to make stop blocking crossings east of passenger station, they must be opened with least possible delay.

Napa: When switching on or across any street crossing, city ordinance requires that member of crew must protect crossing.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Suisun-Fairfield	Crossing Union Ave. when moving against current of traffic.
Thomann	Crossing highway on Napa Valley Cooperative Winery spur.
Vacaville	Crossing on Standard Oil spur.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Avon	San Ramon line, for siding,
Suisun-Fairfield	Napa Jct. line, for westward siding,
Napa Jct.	Schellville line, for Calistoga-Vallejo line at MP 37.35,
Napa Jct.	Suisun-Fairfield line, for Vallejo line, a MP 37.25,
Union	Crossover switch near west end siding, for West Napa line,
Schellville	Napa Jct. line, for NWPRR main track,
Tracy	Niles line, for Martinez line,
Tracy	End double track, for eastward track,
Tracy	Los Banos line, for Niles line.

Napa Jct.: Track known as little balloon is Schellville line main track, but east switch of little balloon track must be left lined for through movement between Schellville line and big balloon track.

Wye connection between Suisun-Fairfield line and Calistoga line is not main track, and switches at each end of this wye track must be left lined for the respective main track movements.

RULE 104 (A). Conductors and engine foremen must personally know that main track switches used by them are locked after clearing main track for Streamliner CITY OF SAN FRANCISCO.

RULE 107. Station train indicators west of Crockett, Martinez and Suisun-Fairfield displaying the illuminated word "Train", indicate a passenger train on westward track at station.

RULE 505. AUTOMATIC BLOCK SYSTEM

Tracy: Eastward movements governed by dwarf light Signals 710, 712, 714. Signals in east end of Tracy are numbered as automatic and are under control of switch tender. When "Stop" is indicated, trains must stop and not proceed until "proceed" is indicated or proceed signal is given with green flag or green light by switch tender.

RULES 510 and 663. The following block signals equipped with triangular number plate bearing the letter "P" have included in their control limits some special protective device. Interlocking signals are listed as "P-I" or "P-SA", and Rule 663 in addition to Rule 510 must be complied with when stopped by such signals:

Eastward Signal	Protection	Westward Signal
P-356 P-358	Spring switch, end double track, Mococo	P-359
P-I	Collision detector, highway underpass west end of wye, Davis	P-I
P-470	Collision detector, highway underpass, MP 47.19 (Pittsburg)	P-479
P-510	Collision detector, highway underpass MP 50.97 (Los Medanos)	P-519
P-374	Spring switch, west end big baloon, Napa Jct.	

RULE 516. Overlap posts:

Port Chicago	Eastward trains,
Nichols (150 feet east of west switch)	Eastward trains,
Los Medanos (250 feet west of Signal 509)	Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows:

Location		Normal Position
Mococo	End double track	Westward track

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Martinez	Junction switch	Bridge line
Napa Jct.	West end big balloon	Suisun-Fairfield main track

Spring switches are also located on other tracks as follows:

West Oakland: Two on incoming engine leads, east of roundhouse; two on outgoing freight engine lead, near tin shop, and one on outgoing engine lead west of roundhouse.

Oakland Pier: West end of tracks 4, 5 and 6.

Stege: On stem of wye.

Tracy: Spring derail on sewer lead, just west of roundhouse leads.

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

Oakland Pier: Limits extend eastward to automatic Signal 40 on eastward main track and to home signal 450 feet east of Signal 40 on westward main track on Martinez line, and to automatic Signal 42 on both main tracks on Niles line, and on yard tracks 9 and 10 to Signal 44; and on yard tracks 11, 12 and 13 to home signal 175 feet east of Maritime overpass.

When siren whistle is sounded, all movement must stop and await proper signal.

The last signal governing movement into any track except tracks 17, 18, 19 and 20 is a two-arm dwarf signal. When home signal displays proceed indication, and approach signal displays yellow aspect, it indicates that movement is to be made into a track occupied by engines or cars. Responsibility for collision will rest with train or engine entering.

Sixteenth St. Tower, Oakland: Limits extend from eastward signal 1500 feet west of 14th St., to Signal Bridge 204.

Whistle signals:

To West Oakland yard, o — —,
From AT&SFRy interchange to Oakland Pier, —,
To AT&SFRy interchange, o — o.

Telephone to Sixteenth St. Tower and West Oakland Tower are on lattice pole 1733, 250 feet east of Signal Bridge 200, and on signal case 30 feet west of junction of freight tracks 1 and 2, to be used when necessary to obtain permission to pass signals as prescribed by Rule 663 (b).

Within limits of Sixteenth St. Tower, Oakland, trains may occupy main track without rear end protection, except that flagman must take position not less than thirty feet behind a train carrying passengers. Signal operator must not authorize a train to pass an interlocking signal displaying stop indication until he has assured himself that conductor and engineer of all trains involved are fully acquainted with intended move so that proper protection will be provided.

Shellmound: Limits extend from Signal Bridge 205 to Signal Bridge 206.

Whistle signal:

To West Oakland yard from freight track 2, o — —.

Martinez: Limits extend on eastward main track from home signal 600 feet east of station building to westward dwarf signals 938 feet east of station building on Tracy line and on Suisun Bay bridge line.

Limits extend on westward main track from signals 2350 feet east of station building on Tracy line and on Suisun Bay bridge line, to Signal 343 at east end of Ozol siding. Crossover switches west of station building, and switches leading from spurs to westward main track within these limits are not interlocked, and permission of signal operator must be obtained before fouling westward main track at any of these switches.

Whistle signals:

To Bridge line, o — —,
To Tracy line, — o —.

Suisun Bay Bridge, Martinez: Bridge zone limits extend on both tracks from home signals 800 feet east of draw span to home signals 550 feet west of draw span.

East end zone limits extend on eastward track only, from semi-automatic signal near upper crossover to westward dwarf signal at Benicia line connection.

Signal operator's permission must be obtained before moving from Benicia line to eastward main track; then if switch indicator indicates block clear, derail and junction switch may be thrown and movement governed by dwarf signal.

Upper crossover is not interlocked, but movement must not be made through crossover without signal operator's permission, unless switch indicator indicates block clear. Signal 345 will govern movement through crossover.

Davis: Limits on eastward and westward main tracks extend from home signal 2200 feet west of tower to signal bridge 1700 feet east of tower, and on Woodland line to signal bridge 1200 feet east of tower.

Whistle signals:

To or from Sacramento from or to Woodland line, o — —, Western Division eastward trains to enter siding, — o —.

Within Davis interlocking limits trains may occupy main track without rear end protection, except that flagman must take position not less than thirty feet behind a train carrying passengers. Signal operator must not authorize a train to pass an interlocking signal displaying stop indication until he has assured himself that conductor and engineer of all trains involved are fully acquainted with intended move so that proper protection will be provided.

Mikon: SNRy crossing: Signal operator on duty 8:30 AM to 5:30 PM, less meal hour, daily except Sunday and holidays. During other hours signals and derails lined for SP movement.

Sacramento River Drawbridge: Eastward trains failing to receive green aspect in approach Signal 878 must stop west of city limit sign, 1030 feet east of Signal 878, unless semi-automatic signal indicates "proceed".

Brazos Drawbridge over Napa River: Signal operators on duty 6:00 AM to 10:00 PM. No movement over bridge permitted during other hours unless signal operator on duty. Derails in main track within interlocking limits east and west of draw span.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and Requires Movement as Follows
M	245	Pinole	Proceed to Shellmound.
S	245	Pinole	Enter westward siding.
M	588	Elmira	Proceed to Dixon.
M	615	Elmira	Proceed to crossover 680 feet east of yard office, Suisun-Fairfield.
M	660	Dixon	Proceed to Davis.
M	681	Dixon	Proceed to Elmira.
S	767	Davis	Enter westward siding (applies to freight trains only).

GENERAL REGULATIONS

RULE 824. Tracy: When train stops on yard track on Martinez line, not less than four hand brakes must be set on west end of train before engine is detached.

RULE 825. Tracy: Train crews must not release brakes on outbound trains until engine is coupled and brake pipe is charged.

RULE 827. TRAIN INSPECTION

Passenger trains operating between Oakland Pier and Gerber making station stop at Davis, must approach at not to exceed 8 MPH to allow forward brakeman to detrain on station side where rear of train will stop. He will then make rolling inspection of train, then walk length of train on opposite side making standing inspection, giving careful attention to running gear and journal boxes, and entrain on station side.

Westward trains via San Ramon Branch containing carloads of rock, sand or gravel from Eliot must be given inspection at Danville.

AIR BRAKE RULES

RULE 2. Running test must be made on engines immediately after being detached from trains arriving Oakland Pier.

RULE 17. Retainers must be used on freight and mixed trains as follows:

One retainer for every 160 Ms in train, San Ramon to Walnut Creek.

With 20 or more cars and tonnage averaging over 150 Ms per operative brake, use 10 retainers on head end of train, or more if requested by engineer, Creston to Napa Jct., and Creston to Cordelia.

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing trains at Port Costa and Suisun-Fairfield until train i made up.

RULE 25. Rear end test must be made immediately prior to departure from:

Napa Jct. .... Trains via Cordelia,
Cordelia .... Eastward trains that stop,
Creston .... Trains that stop.

Freight trains may pass Creston without stopping for rear end test if proceed signals are given by trainmen after complying with Air Brake Rule 4. Speed must be reduced to 8 MPH. Helper engineers will reduce working steam sufficiently in advance so that lead engineer may control speed by gravity.

PASSENGER TRAINS

RULE 39. Running test must be made as follows:

Westward trains for Oakland Pier, at freight lead crossing, Oakland.

Equipment being handled between Oakland Pier and West Oakland, in either direction, as soon as practicable after starting.

Eastward trains via Bahia, at Martinez, but may be made at Ozol if no stop is to be made at Martinez.

Westward trains, at MP 36 West of Bahia.

Eastward and westward trains at Creston.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description	
3.5	Oakland Pier	Posts supporting trainshed	Side
6.6	Emeryville	W. U. pole line, near Park Ave.	Side
14.5	Richmond	AT&SFRy overhead bridge	Overhead
16.0	San Pablo	AT&SFRy overhead bridge	Overhead & side
16.6	San Pablo	Westward water column	Side
22.1	Pinole	Rock bluff, eastward track	Side
23.7	Hercules	Industrial Ry overhead bridge	Overhead
24.4	Hercules	Rock bluff, eastward track	Side
26.7	Oleum	Tunnel No. 1	Overhead & side
27.7	Selby	Tunnel No. 2	Overhead & side
31.2	Port Costa	Water column, eastward track	Side
34.7	Martinez	Alhambra slough bridge	Side
59.4	Elmira	Water column, eastward track	Side
75.8	Davis	Signal bridge, Woodland line	Overhead
[illegible]8.5	Washington	Sacramento River drawbridge	Side
[illegible]3.6	Vacaville	Ulatis Creek bridge	Side
75.8	Winters	Putah Creek bridge	Side
46.5	Thomasson	Suisun Creek bridge	Side
46.0	Thomasson	Tunnel	Overhead
69.5	Maple	Napa River bridge	Side
37.9	Avon	Pachecho slough bridge	Side
43.1	Nichols	Wagon bridge	Overhead & side
[illegible]3.2	Nichols	AT&SFRy overhead bridge	Overhead & side
48.8	Pittsburg	Signal bridge	Overhead
40.7	Brazos	Drawbridge over Napa River	Side
42.5	Concord	Water tank	Side
44.6	Hookston	Walnut Creek bridge	Overhead & side
45.8	Las Juntas	SNRy trolley wires	Overhead
49.2	Walnut Creek	San Ramon Creek bridge	Overhead & side
57.0	San Ramon	San Ramon Creek bridge	Overhead & side

Windows of occupied passenger cars must be kept closed, and passengers warned of close clearance when passing over Napa River drawbridge at Brazos.

MISCELLANEOUS

1. Emergency water supply only, at Pittsburg.

Eastward freight trains take water at Davis in preference to Swanston.

Take water at Vallejo, Napa or Cordelia instead of at Napa Jct., if practicable.

Water tank at Winters out of service. Engines will take water from stand-pipe located 1400 feet east of station.

4 (a). When eastward freight train is to pick up pusher engine at Port Costa, train brakes must be applied on arrival, and must not be released until pusher engine has coupled in.

6. Engines or trains using wye at Napa Jct. must approach from Suisun-Fairfield line and go around via Napa line.

10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Engines over 162,000 pounds on drivers	Cordelia—Winery spur.
"	Napa Jct.—Calistoga line wye.
All	Ramal—Beyond stock chute on corral.
All	Concord—Over gravel hoppers east of station serving Concord Sand and Gravel Company, one on old siding and one on middle track.
T-23-26-28-31-32-37-40-58, P, A, Mk	Vacaville—Except main track and Pacific Fruit Exchange spur.
GS, F, SP, MM, AC, and Eng. 2371	Tremont—Corral track.
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Newlove—Spur.
"	Nichols—Nos. 3 and 4 tracks of General Chemical Co.

Load limit (car and contents):

Oakland-Sacramento	251,000 pounds
Martinez-Tracy	251,000 pounds
Suisun-Fairfield-Napa Jct.	210,000 pounds
Napa Jct.-Larkmead	210,000 pounds
Larkmead-Calistoga	169,000 pounds
Union-West Napa	210,000 pounds
Napa Jct.-Schellville	210,000 pounds
Napa Jct.-Vallejo	210,000 pounds
Elmira-Winters	210,000 pounds
Winters-Esparto	169,000 pounds
Avon-Radum	169,000 pounds

When false bents are in place on bridge 56.99 load limit between Avon and Radum will be 210,000 pounds.

Unless authorized by Superintendent, heavier loads must not be handled.

15. Trains must not pass switchtenders' stations at Sixth and Seventh Streets, Sacramento, without receiving signal from switchtender to proceed (green flag by day and green light by night) and must move with caution between Sacramento River bridge and Seventh Street.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in Speed Restrictions for Engines, appearing in Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
EASTWARD, OAKLAND PIER TO SACRAMENTO:					
MP MP					
3.50 to 4.25	15	15	15	15	15
4.25 to 4.81 (crossing)	20	20	20	20	20
4.81 to 11.42	45	45	40	40	30
★11.42 to 16.00 (Richmond)	45	45	40	40	20
16.00 to 16.31	45	45	40	40	30
16.31 to 19.00	80	65	40	40	30
19.00 to 21.50	70	65	40	40	30
21.50 to 27.90	45	40	40	40	20
27.90 to 34.40	45	45	40	40	20
★34.40 to 34.70 (Martinez), except:	15	15	15	15	15
★Eastward trains via bridge	20	20	30	20	15
34.70 to 33.58	45	45	40	40	20
33.58 to 33.64 (lift span)	30	30	30	30	20
33.64 to 35.50	45	45	40	40	20
35.50 to 37.12	75	65	50	45	30
37.12 to 37.40 (curve)	70	65	50	45	30
37.40 to 48.38	75	65	50	45	30
48.38 to 49.00 (Suisun-Fairfield)	45	45	30	30	20
49.00 to 54.36	95	70	50	45	30
54.36 to 55.19 (curve)	85	70	50	45	30
55.19 to 67.40	95	70	50	45	30
67.40 to 67.60 (Dixon)	70	70	50	45	20
67.60 to 75.20	95	70	50	45	30
75.20 to 76.00	45	40	30	30	20
76.00 to 85.50	95	70	50	45	30
85.50 to 86.90	70	60	40	40	30
86.90 to 87.80	45	45	30	30	30
87.80 to 88.54	35	35	30	30	30
88.54 to 89.50 (Sacramento)	10	10	10	10	10
EASTWARD, MARTINEZ TO TRACY:					
MP MP					
34.70 to 34.79 (junction switch)	..	35	30	30	20
34.79 to 35.88	..	45	30	30	20
35.88 to 35.91 (spring switch)	..	35	35	35	20
35.91 to 48.90	..	70	50	45	30
★48.90 to 48.95 (Pittsburg)	..	25	25	25	20
48.95 to 53.30	..	70	50	45	30
★53.30 to 53.60 (Antioch)	..	15	15	15	15
53.60 to 80.70	..	70	50	45	30
80.70 to 82.10	..	45	30	30	30
82.10 to 82.39 (junction Niles line)	..	10	10	10	10

TERRITORY	Streamliner CITY OF SAN FRANCISCO	OTHER PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
				RUNNING FORWARD	RUNNING BACKWARD
Column:	A	1	2	3	4
WESTWARD, SACRAMENTO TO OAKLAND PIER:					
MP MP					
89.50 to 88.54	10	10	10	10	10
88.54 to 87.80	35	35	30	30	30
87.80 to 86.90	45	45	30	30	30
86.90 to 85.50	70	60	40	40	30
85.50 to 76.00	95	70	50	45	30
76.00 to 75.20	45	40	30	30	20
75.20 to 67.60	95	70	50	45	30
67.60 to 67.40 (Dixon)	70	70	50	45	20
67.40 to 55.19	95	70	50	45	30
55.19 to 54.36 (curve)	85	70	50	45	30
54.36 to 49.00	95	70	50	45	30
49.00 to 48.38 (Suisun-Fairfield)	45	45	30	30	30
48.38 to 35.50	75	65	50	45	30
35.50 to 33.64	45	45	40	40	20
33.64 to 33.58 (lift span)	30	30	30	30	20
33.58 to 34.70	45	45	40	40	20
★34.70 to 34.40 (Martinez)	15	15	15	15	15
34.40 to 27.90	45	45	40	40	20
27.90 to 21.50	45	40	40	40	20
21.50 to 19.00	70	65	40	40	30
19.00 to 16.31	80	65	40	40	30
16.31 to 16.00	45	45	40	40	30
★16.00 to 11.42 (Richmond)	45	45	40	40	20
11.42 to 4.81	45	45	40	40	30
4.81 to 4.25 (crossing)	20	20	20	20	20
4.25 to 3.50 (Oakland Pier)	15	15	15	15	15
WESTWARD, TRACY TO MARTINEZ:					
MP MP					
82.39 to 82.10	..	10	10	10	10
82.10 to 80.70	..	45	30	30	30
80.70 to 53.60	..	70	50	45	30
★53.60 to 53.30 (Antioch)	..	15	15	15	15
53.30 to 48.95	..	70	50	45	30
★48.95 to 48.90 (Pittsburg)	..	25	25	25	20
48.90 to 35.91 (Mococo)	..	70	50	45	30
35.91 to 34.70 (Martinez)	..	30	30	30	20

★Regulated by City ordinance.

When electro-pneumatic brakes are inoperative, maximum speed of 95 MPH shown in Column A, and permissible speed as indicated on round yellow SIGNAL speed boards, must be reduced by 5 MPH.

Streamliner CITY OF SAN FRANCISCO when handled by steam power and consisting of streamlined equipment, may run not to exceed 75 MPH on TANGENT TRACK where 70 MPH is authorized in Column 1.

Streamliner CITY OF SAN FRANCISCO when operating against the current of traffic must not exceed speed permitted OTHER PASSENGER TRAINS, as shown in Column 1.

Nos. 51 and 52, consisting of streamlined equipment with P-7, 8, 10, 12 or Mt class engine equipped with electro-pneumatic brakes functioning on engine and all cars, may run not to exceed 75 MPH on TANGENT TRACK where maximum speed of 70 MPH is authorized in Column 1.

No. 442 (CCM) may make maximum speed of 50 MPH handling ordinary box cars, in territory where maximum freight and mixed train speed is shown as 40 MPH.

♦Freight and Mixed trains with twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed Permitted with Certain Equipment"; scale test cars; and cars with arch bar trucks must not exceed maximum speed of 40 MPH.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

SPEED RESTRICTIONS: Maximum speed of trains is shown below. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
BETWEEN AVON AND RADUM:				
MP MP				
38.10 and 44.64	20	20	15	15
44.64 and 44.67 (bridge)	15	15	15	15
44.67 and 49.22	20	20	15	15
49.22 and 49.25 (bridge)	10	10	10	10
49.25 and 56.99	20	20	15	15
56.99 and 57.02 (bridge)	10	10	10	10
57.02 and 67.80 (Radum)	20	20	15	15
BETWEEN SUISUN-FAIRFIELD AND CALISTOGA:				
50.50 and 44.80 (Cordelia)	40	25	25	20
44.80 and 37.20 (Napa Jct.)	35	25	25	15
37.20 and 45.20 (Napa)	25	25	15	15
45.20 and 47.10 (Napa city limits)	25	25	15	15
47.10 and 53.50	25	25	15	15
53.50 and 63.00	20	20	15	15
★63.00 and 63.70 (St. Helena)	20	20	15	15
63.70 and 71.78 (Calistoga)	20	20	15	15

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
BETWEEN NAPA JCT. AND SCHELLVILLE:				
MP MP				
37.20 and 40.65	25	25	25	15
40.65 and 40.75 (Brazos drawbridge)	10	10	10	10
40.75 and 48.60	25	25	25	15
48.60 and NWPRR wye	10	10	10	10
BETWEEN NAPA JCT. AND VALLEJO:				
37.20 and 32.00	25	25	15	15
32.00 and 31.99 (Vallejo, Tennessee St.)	15	15	15	15
31.99 and 30.10 (Vallejo)	25	25	15	15
BETWEEN WEST NAPA AND UNION:				
50.80 and 48.80	10	10	10	10
BETWEEN ELMIRA AND ESPARTO:				
50.60 and 76.00	25	25	25	15
76.00 and 90.35	15	15	15	15

★Regulated by City ordinance.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Martinez	Martinez to Bridge Summit	Bridge Summit to Sacramento	Sacramento to Martinez	Martinez and Tracy
DEP-3	6011	6000	4000	6000	5800	....
DEP-4	6000 to 6004	....	....	....	....	....
DEP-5	6005 to 6007	18000	6600	13400	12650	....
DEP-6	6008 to 6010	18000	6600	13400	12650	....
DEF-1	6100 to 6118	....	....	....	....	....
DEF-2	6119 to 6139	....	....	....	....	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	3200	1000	2150	1950	3200
DES-100 to 109	1300 to 1425	4500	1600	3350	3100	4500
E-23	1500	3350	1400	2950	2800	3350
M-4	1617 to 1713	4450	1900	3900	3700	4450
M-6, 8	1721 to 1803, 1823 to 1825	5250	2250	4550	4350	5250
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500	2400	4850	4600	5500
M-11	1832 to 1835	5700	2500	5000	4800	5700
T-1	2242 to 2271	3800	1650	3300	3150	3800
T-8, 9	2161 and 2178	2750	1150	2400	2250	2750
T-23	2301 to 2310	5500	2350	4800	4550	5500
T-26	2283 to 2299	4800	2000	4200	3900	4800
T-28, 31	2311 to 2362	6000	2600	5250	5000	6000
T-32	2363 to 2370, 2372 to 2384	6150	2600	5350	5000	6150
T-40	2371	6150	2600	5350	5000	6150
T-37	2105 and 2106	5450	2350	4800	4600	5450
T-57, 58	2385 and 2386	4950	2150	4300	4100	4950
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	4950	2050	4300	4000	4950
P-1	2403 to 2407 and 2415	4950	2150	4300	4000	4950
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450	2400	4750	4400	5450
P-6	2453, 2454 and 2458	6100	2550	5350	4950	6100
P-7	2476 and 2477	6500	2800	5700	5450	6500
P-8, 10	2461 to 2474, 2478 to 2483	6800	2850	5900	5550	6800
P-8, 10	2475, 2484 to 2491	6800	3050	5900	5550	6800
P-11	3100 to 3109	5250	2250	4550	4350	5250
P-12	3120 to 3129	6900	2900	6000	5750	6900
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600	2900	5750	5550	6600
C-15	2505 to 2507	4250	1850	3700	3550	4250
C-17	2510 and 2511	5200	2300	4550	4350	5200
C-18	3400 to 3409	6050	2650	5300	5100	6050
C-19	3410 to 3426	6300	2750	5550	5300	6300
TW-1	2900 to 2913	5050	2200	4400	4200	5050
TW-2, 3	2932 to 2952	4050	1750	3550	3400	4050
TW-4, 6	2926 to 2931 and 2957	3850	1650	3350	3200	3850
TW-8	2914 to 2923	5550	2450	4900	4650	5550
A-3	3025, 3036, 3052 and 3057	3900	1650	3400	3050	3900
A-6	3000 to 3003	4800	2100	4150	3750	4800
Mk-2, 4	3201 to 3240	7650	3350	6700	6400	7650
Mk-5, 6	3241 to 3277	8450	3650	7350	7000	8450
Mk-7, 8, 9	3300 to 3324	9200	4050	8050	7750	9200
Mk-10	3295	7100	3100	6200	5950	7100
Mk-11	3297 and 3298	6800	3000	5950	5700	6800
F-1	3611 to 3652	9600	4200	8400	8050	9600
F-3	3653 to 3667	11000	4850	9650	9250	11000
F-4, 5	3668 to 3769	11000	5150	9650	9250	11000
MM-3	3930 and 3931	12800	5600	11200	10700	12800
AC-1, 2, 3	4014 to 4047	13300	5900	11650	11150	13300
AC-4, 5	4100 to 4125	17300	7650	15100	14500	17300
AC-6 to 12	3800 to 3811, 4126 to 4294	18300	8050	16000	15300	18300
Mt-1, 3, 4, 5	4300 to 4376	9000	4050	7850	7400	9000
Mt-2	4385 to 4390	9750	4200	8500	8150	9750
GS-1, 2	4401 to 4415	9600	4300	8400	7900	9600
GS-3, 4, 5, 6	4416 to 4469	10200	4400	8900	8500	10200
SP-1, 2, 3	5000 to 5048	12950	5700	11350	10850	12950

In figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Suisun-Fairfield to Napa Jct.	Napa Jct. to Suisun-Fairfield	Napa Jct. and Larkmead Union and West Napa	Larkmead and Calistoga	Napa Jct. to Schellville Napa Jct. to Vallejo	Schellville to Napa Jct.
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	....	....	....	....	....	....
DES-100 to 109	1300 to 1425	....	....	....	....	....	....
E-23	1500	800	1100	1300	1300	4040	1350
M-4	1617 to 1713	1100	1500	1800	1800	5300	1820
M-6, 8	1721 to 1803, 1823 to 1825	1300	1800	2100	....	6200	2140
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	1400	1900	2250	....	6550	2280
M-11	1832 to 1835	1450	2000	2300	....	6820	2370
T-1	2242 to 2271	950	1300	1500	1500	4500	1550
T-8, 9	2161 and 2178	650	920	1050	1050	3270	1100
T-23	2301 to 2310	1350	1900	2200	....	6500	2250
T-26	2283 to 2299	1150	1600	1900	....	5730	1950
T-28, 31	2311 to 2362	1500	2100	2450	....	7170	2480
T-32	2363 to 2370, 2372 to 2384	1500	2100	2500	....	7300	2530
T-40	2371	....	....	....	....	....	....
T-37	2105 and 2106	1350	1900	2200	....	6500	2250
T-57, 58	2385 and 2386	1250	1700	2000	....	5880	2040
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	1150	1600	③1950	....	5900	1990
P-1	2403 to 2407 and 2415	1200	1700	....	....	6200	2090
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	1350	1900	③2300	....	6410	2180
P-6	2453, 2454 and 2458	1500	2100	③3350	....	7300	2490
P-7	2476 and 2477	1600	2250	③3550	....	7700	2660
P-8, 10	2461 to 2474, 2478 to 2483	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	....	....	....	....	....	....
P-11	3100 to 3109	1300	1800	2100	....	④6330	2150
P-12	3120 to 3129	....	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	1700	2300	2650	....	7800	2720
C-15	2505 to 2507	1100	1450	1700	1700	5050	1760
C-17	2510 and 2511	1350	1850	2150	....	6200	2180
C-18	3400 to 3409	1550	2150	2500	....	7230	2530
C-19	3410 to 3426	1650	2200	2600	....	7530	2630
TW-1	2900 to 2913	1300	1750	2050	....	6000	2100
TW-2, 3	2932 to 2952	1000	1400	1600	....	4800	1670
TW-4, 6	2926 to 2931 and 2957	960	1300	1550	1550	4600	1570
TW-8	2914 to 2923	1400	1950	2250	....	6650	2310
A-3	3025, 3036, 3052 and 3057	910	1300	③1550	....	4900	1620
A-6	3000 to 3003	1150	1650	③1850	....	5700	1910
Mk-2, 4	3201 to 3240	1900	2650	①3000	....	①8800	3050
Mk-5, 6	3241 to 3277	2150	2900	①3400	....	①10000	3470
Mk-7, 8, 9	3300 to 3324	2400	3250	②3750	....	②10750	3820
Mk-10	3295	1850	2500	③2900	....	8450	2960
Mk-11	3297 and 3298	1750	2411	③2800	....	8100	2850
F-1	3611 to 3652						
F-3	3653 to 3667						
F-4, 5	3668 to 3769						
MM-3	3930 and 3931						
AC-1, 2, 3	4014 to 4047						
AC-4, 5	4100 to 4125						
AC-6 to 12	3800 to 3811, 4126 to 4294						
Mt-1, 3, 4, 5	4300 to 4376						
Mt-2	4385 to 4390						
GS-1, 2	4401 to 4415						
GS-3, 4, 5, 6	4416 to 4469						
SP-1, 2, 3	5000 to 5048						

NOTES:

①Applies to engines 3201, 3203 to 3206 incl., 3211, 3213, 3214, 3224, 3227, 3229, 3236, 3237, 3241, 3247, 3251, 3253, 3255, 3259, 3266 and 3272 only between Napa Jct. and Larkmead, and Union and West Napa. Other Mk-2, 4, 5, 6, class engines not permitted to operate beyond Napa River Bridge 45.62 nor between MP 33 and Vallejo.

②Mk-7, 8, 9 class engines not permitted to operate beyond Napa River Bridge 45.62 nor between MP 33 and Vallejo.

③P-1, 3, 4, 5, 6, 7, A-3, 6 and Mk-10, 11 class engines not permitted to operate beyond Yountville, nor between Union and West Napa.

④P-11 class engines not permitted to operate between Napa Jct. and Vallejo.

Between Suisun-Fairfield and Napa Jct., and between Napa Jct. and Calistoga, and between Union and West Napa, in figuring tonnage of train, add 3 Ms for each empty or underloaded car of 55 Ms or less.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—MARTINEZ SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Vallejo to Napa Jct. Elmira to Winters	Winters to Elmira	Winters and Esparto	Radum to San Ramon	San Ramon to Radum	Avon to San Ramon	San Ramon to Avon
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022							
DES-100 to 109	1300 to 1425	....	....	....				
E-23	1500	1500	1720		1890	4040	1230	4040
M-4	1617 to 1713	2040	2300	4950	2500	5300	③1680	③5300
M-6, 8	1721 to 1803, 1823 to 1825	2400	2700		2970	6200	③2000	③6200
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	2550	2870		3100	②6550	2100	③6550
M-11	1832 to 1835	2660	2980	....	3250	②6820	2200	③6800
T-1	2242 to 2271	1750	1960	4300	2150	4500	1430	4500
T-8, 9	2161 and 2178	1240	1390	3100	1540	3270	1000	3270
T-23	2301 to 2310	2520	2830	....	3100	6500	....	....
T-26	2283 to 2299	2200	2470	....	2720	5730	....	....
T-28, 31	2311 to 2362	2790	3130	....	3430	7170	....	....
T-32	2363 to 2370, 2372 to 2384	2830	3180	....	3500	7300	....	....
T-40	2371						....	....
T-37	2105 and 2106	2530	2840	....	3100	6500	....	....
T-57, 58	2385 and 2386	2280	2560	....	2800	5880	....	....
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	2240	2520		2780	5900	....	....
P-1	2403 to 2407 and 2415	2350	2650		2910	6200	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	2460	2770		3050	6410	....	....
P-6	2453, 2454 and 2458	2850	3350	....	3460	7300	....	....
P-7	2476 and 2477	3050	3550	....	3690	7700	....	....
P-8, 10	2461 to 2474, 2478 to 2483	....	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	....	....	....	....	....	....	....
P-11	3100 to 3109	②2900	2900	....	3000	6330	....	....
P-12	3120 to 3129	....	....	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	3050	3420	7400	3750	7800	2500	7800
C-15	2505 to 2507	1970	2200	4750	2400	5050	1600	5050
C-17	2510 and 2511	2440	2730	5870	3000	6200	2020	6200
C-18	3400 to 3409	2830	3180	6850	3480	7230	③2700	③7250
C-19	3410 to 3426	2950	3300	7100	3620	7530	③2850	③7550
TW-1	2900 to 2913	2350	2630	5700	2880	6000	....	....
TW-2, 3	2932 to 2952	1880	2100	4550	2310	4800	....	....
TW-4, 6	2926 to 2931 and 2957	1770	1990	4350	2180	4600	1450	4600
TW-8	2914 to 2923	2590	2900	6300	3180	6650	....	....
A-3	3025, 3036, 3052 and 3057	1830	2070		2290	4900	....	....
A-6	3000 to 3003	2150	2430		2670	5700	....	....
Mk-2, 4	3201 to 3240	①3430	①3850	....	①4230	①8800	....	....
Mk-5, 6	3241 to 3277	①3900	①4370	....	①4800	①10000	....	....
Mk-7, 8, 9	3300 to 3324	①4180	....	....	....	①10750	....	....
Mk-10	3295	3320	3700	....	4060	8450	....	....
Mk-11	3297 and 3298	3190	3570	....	3900	8100	....	....
F-1	3611 to 3652							
F-3	3653 to 3667							
F-4, 5	3668 to 3769							
MM-3	3930 and 3931							
AC-1, 2, 3	4014 to 4047							
AC-4, 5	4100 to 4125							
AC-6 to 12	3800 to 3811, 4126 to 4294							
Mt-1, 3, 4, 5	4300 to 4376							
Mt-2	4385 to 4390							
GS-1, 2	4401 to 4415							
GS-3, 4, 5, 6	4416 to 4469							
SP-1, 2, 3	5000 to 5048							

NOTE:

①Mk-2, 4, 5, 6, 7, 8, 9 class engines, except engines 3201, 3203 to 320 incl., 3211, 3213, 3214, 3224, 3227, 3229, 3236, 3237, 3241, 3247, 3251, 3253, 3255, 3259, 3266 and 3272 not permitted to operate between MP 33 and Vallejo, San Ramon and Asco, Elmira and Winters.

②P-11 class engines not permitted to operate between Napa Jct. and Vallejo.

③C and M class engines permitted to operate only when false work in place on bridge 56.99.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 14 (d). As specified below, — — — — o will be indication that flagman may return from west as prescribed by Rule 99:

Fresno	Trains on Pratton line,
Biola Jct.	Trains on Biola line.

RULE 14 (e). As specified below, — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Tracy	Trains on Los Banos line,
Kerman	Trains on Biola line,
Ingle	Trains on Riverdale line.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP			East MP
80.70	Tracy	(Martinez-Los Banos line)	85.64
69.19	"	(Niles-Lathrop line)	74.37
139.61	Los Banos		142.01
192.46	Kerman		194.53
	"	(Biola line)	194.65
206.32	Fresno	(Pratton-Tulare line)	210.79
208.44	"	(Biola-Porterville line)	208.15
199.07	"	(Merced-Clovis line)	209.60

Fresno: Trains or engines will not move against current of traffic on double track, except on authority of yardmaster. When making movements against current of traffic, trains or engines must be preceded by flagman over railway and street crossings at grade where wigwags installed, protecting crossings during movements, except where crossing watchman located.

Trains must receive proceed signal from yardman (green flag by day, green light by night) between Kern St. (east of passenger station) and Merced St. (west of passenger station).

Westward trains via Pratton line must receive signal from yardman at Divisadero St. (green flag by day, green light by night).

When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 (F) and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

RULE 103 (A). House track at Newman must not be switched between Merced and Fresno Sts. from five minutes before arrival to five minutes after departure of passenger trains.

While switching over Fourth St., Los Banos, on back track and west middle, a member of crew must protect the crossing.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Vernalis	Crossing on Associated Dehydrators spur,
West of Vanormer	Highway crossing on H&N Farms spur.
Cromir	Crossing Shaw Ave. on team track.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Tracy	Niles line, for Martinez line,
Tracy	End double track, for eastward track,
Tracy	Los Banos line, for Niles line,
Ingle	Riverdale line, for siding,
Kerman	Biola line, for Pratton line,
Fresno Yard	End double track, for westward track,
Fresno	Pratton line, for eastward main track.

RULE 505. AUTOMATIC BLOCK SYSTEM

Tracy: Signals in east end Tracy are numbered as automatic and are under control of switch tender. When "stop" is indicated, trains must stop and not proceed until "proceed" is indicated or proceed signal is given with green flag or green light by switch tender.

Eastward movements governed by dwarf light Signals 710, 712, 714.

Westward movement from Los Banos Subdivision governed by Signal 823, located 300 feet east of puzzle switch, top arm governs movement on main track and lower arm governs movement to hill or local yard.

Trains and engines stopped by Signal 709 may then proceed with caution if proceed signal received from yardman.

RULE 516. Overlap posts:

Floyd (1500 feet east of west switch) . . . . Eastward trains.

RULE 535. SPRING SWITCHES

Tracy: Spring derail on sewer lead, just west of roundhouse leads.

RULE 605. INTERLOCKING

Lyoth: WPRR crossing. Whistle signal:

To enter or leave storage track, o — o.

Biola Jct.: Limits extend on Merced line from 675 feet west of junction switch, and on Biola line from 575 feet west of junction switch, to 930 feet east of junction switch on Merced line, and to dwarf signal 290 feet east of junction switch on No. 1 drill track.

Trains and engines stopped by signals will call signal operator at train-order office Muscatel by telephone and be governed by his instructions. Telephones and instructions for hand operation of dual control switches are located in battery house at junction switch and at derail on Biola line.

Dwarf signal on 7½-foot mast on No. 1 drill track will display green aspect for movement to Merced line, yellow aspect for movement to Biola line.

GENERAL REGULATIONS

RULE 824. Tracy: When train stops on yard track in Hill yard not less than three hand brakes must be set on cut west of C St., and four hand brakes must be set on east end of train before engine is detached.

When train stops on yard track on Martinez line, not less than four hand brakes must be set on west end of train before engine is detached.

RULE 825. Cars must not be left within 250 feet of highway crossing at Floyd.

Train crews must not release brakes on outbound trains at Tracy until engine is coupled and brake pipe is charged.

RULE 827. TRAIN INSPECTION

Passenger trains making station stop at Los Banos must approach at not to exceed 8 MPH to allow forward brakeman to detrain on station side where rear of train will stop. He will then make rolling inspection of train, then walk length of train on opposite side making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 829. Los Banos: City ordinance provides that highways or streets within city limits shall not be obstructed for longer than 10 minutes.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description	
140.2	Los Banos	Warehouse opposite east leg of wye	Side

SPECIAL INSTRUCTIONS—LOS BANOS SUBDIVISION

MISCELLANEOUS

10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Tracy—Brewery; Holly Sugar spur, Patterson—Patterson Ranch spur.
"	Crows Landing—Yancy Lbr. spur.
"	Newman—Golden State Creamery spur; Lumber Co. spur.
"	Gustine—California Milk spur and Carnation Co. loading tracks.
"	Los Banos—Builders Lbr. spur; Union Oil spur; Golden State Creamery spur.
Mt-2, GS, F, SP, MM, AC, and Eng. 2371	Los Banos—Wye.

Load limit (car and contents):

Tracy-Fresno . . . . 251,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in Speed Restrictions for Engines, appearing in Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, TRACY TO FRESNO:				
MP MP				
82.62 to 83.00	10	10	10	10
83.00 to 85.16	45	30	30	30
85.16 to 85.17 (WPRR crossing)	40	25	25	20
85.17 to 85.64	45	30	30	30
85.64 to 139.61	55	40	40	30
139.61 to 140.10	45	30	30	30
140.10 to 141.30 (Los Banos)	20	20	20	10
141.30 to 142.01	45	30	30	30
142.01 to 206.22	55	40	40	30
206.22 to 206.87	40	30	30	20
206.87 to 207.36 (curve and junction switch)	15	15	15	15
★207.36 to 208.40 (Fresno)	20	20	15	10
EASTWARD, KERMAN TO BIOLA JCT.:				
194.09 to 194.11 (junction switch)	15	15	15	15
194.11 to 208.60	30	30	30	30
Thru jct. switch & crossover, Biola Jct.	25	25	25	20

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES RUNNING FORWARD	LIGHT ENGINES RUNNING BACKWARD
Column:	1	2	3	4
WESTWARD, FRESNO TO TRACY:				
MP MP				
★208.40 to 207.36	20	20	15	10
207.36 to 206.87 (junction switch and curve)	15	15	15	15
206.87 to 206.22	40	30	30	20
206.22 to 142.01	55	40	40	30
142.01 to 141.30	45	30	30	30
141.30 to 140.10 (Los Banos)	20	20	20	10
140.10 to 139.61	45	30	30	30
139.61 to 85.64	55	0	40	30
85.64 to 85.17	45	30	30	30
85.17 to 85.16 (WPRR crossing)	40	25	25	20
85.16 to 83.00	45	30	30	30
83.00 to 82.62 (junction Niles line)	10	10	10	10
WESTWARD, BIOLA JCT. TO KERMAN:				
Thru jct. switch & crossover, Biola Jct.	25	25	25	20
208.60 to 194.11	30	30	30	30
194.11 to 194.09 (junction switch)	15	15	15	15

★Regulated by City ordinance.

♦Freight and Mixed trains with twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed Permitted with Certain Equipment"; scale test cars; and cars with arch bar trucks must not exceed maximum speed of 40 MPH.

SPECIAL INSTRUCTIONS—LOS BANOS SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Tracy and Fresno Kerman and Biola Jct.
DEP-4	6000 to 6004	....
DEP-5	6005 to 6007	....
DEP-6	6008 to 6010	....
DEF-1	6100 to 6118	....
DEF-2	6119 to 6139	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	3200
DES-100 to 109	1300 to 1425	4500
E-23	1500	3350
M-4	1617 to 1713	4450
M-6, 8	1721 to 1803, 1823 to 1825	5250
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500
M-11	1832 to 1835	5700
T-1	2242 to 2271	3800
T-8, 9	2161 and 2178	2750
T-23	2301 to 2310	5500
T-26	2283 to 2299	4800
T-28, 31	2311 to 2362	6000
T-32	2363 to 2370, 2372 to 2384	6150
T-40	2371	6150
T-37	2105 and 2106	5450
T-57, 58	2385 and 2386	4950
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	4950
P-1	2403 to 2407 and 2415	4950
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450
P-6	2453, 2454 and 2458	6100
P-7	2476 and 2477	6500
P-8, 10	2461 to 2474, 2478 to 2483	6800
P-8, 10	2475, 2484 to 2491	6800
P-11	3100 to 3109	5250
P-12	3120 to 3129	6900
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600
C-15	2505 to 2507	4250
C-17	2510 and 2511	5200
C-18	3400 to 3409	6050
C-19	3410 to 3426	6300
TW-1	2900 to 2913	5050
TW-2, 3	2932 to 2952	4050
TW-4, 6	2926 to 2931 and 2957	3850
TW-8	2914 to 2923	5550
A-3	3025, 3036, 3052 and 3057	3900
A-6	3000 to 3003	4800
Mk-2, 4	3201 to 3240	7650
Mk-5, 6	3241 to 3277	8450
Mk-7, 8, 9	3300 to 3324	9200
Mk-10	3295	7100
Mk-11	3297 and 3298	6800
F-1	3611 to 3652	9600
F-3	3653 to 3667	11000
F-4, 5	3668 to 3769	11000
MM-3	3930 and 3931	12800
AC-1, 2, 3	4014 to 4047	13300
AC-4, 5	4100 to 4125	17300
AC-6 to 12	3800 to 3811, 4126 to 4294	18300
Mt-1, 3, 4, 5	4300 to 4376	9000
Mt-2	4385 to 4390	9750
GS-1, 2	4401 to 4415	①9600
GS-3, 4, 5, 6	4416 to 4469	①10200
SP-1, 2, 3	5000 to 5048	12950

①GS Class engines not permitted to operate in passenger service.

In figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 14 (e). As specified below, — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Galt.......Trains on Ione line,
Lodi.......Trains on Valley Spring and Woodbridge lines,
Stockton...Trains on Oakdale line,
Lathrop....Trains on Merced line,
Tracy.....Trains on Los Banos line.

RULE 14 (k). Will not apply on C.T.C. system.

RULE 93. Yard limits in which the provisions of Rule 93 will apply, except within C.T.C. limits, are established at the following points:

West MP		East MP
80.70	Tracy (Martinez-Los Banos line)	85.64
69.19	“ (Niles-Lathrop line)	74.37
80.56	Lathrop (Tracy-Stockton line)	83.04
	“ (Merced line)	94.02
85.07	Stockton	93.72
	“ (Oakdale line)	94.41
120.23	Oakdale	122.92
101.57	Lodi	104.25
	“ (Victor line)	104.45
	“ (Woodbridge line)	End track
111.10	Galt	113.21
	“ (Ione line)	112.91
85.51	Sacramento	95.35
131.60	“ (Stockton line)	136.33
129.04	Valley Spring	130.50
141.94	Kentucky House	End track
138.28	Ione	End track

RULE 98. Railroad crossings at grade not interlocked:

Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Stockton...CCTCo., crossing of Oakdale Branch near MP 92.0,

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Roma......CCTCo., crossing of Valley Spring line,
Oakdale....AT&SFRy, crossing of Oakdale Branch, MP 116.7 on
Ione Branch. CCTCo., crossing of Ione Branch.

Drawbridge not interlocked:

Stockton: Drawbridge over San Joaquin River, on spur connecting with SPBRy Drawbridge normally open for river traffic. SP movement must stop. Sound whistle Signal 14 (j) for bridge to be lined.

RULE 103 (A). Stockton: When making movements eastward on Scotts Avenue, before crossing El Dorado Street, following will govern:

With engine ahead pulling cars, stop and proceed,

With cars being pushed, stop and proceed with yardman protecting movement over El Dorado Street.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Tomspur.....Crossing on Hershel Canning Co. spur,
Woodbridge..Crossing Woodbridge road on General Mills spur,
Carbondale...Crossing county road when on industry track.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Tracy........Niles line, for Martinez line,
Tracy........End double track, for eastward track,
Tracy........Los Banos line, for Niles line,
Lodi.........Woodbridge line, for Lathrop line,
Lodi.........Yard track for Valley Spring line,
Galt.........West leg of wye for Ione line,
Galt.........East leg of wye for straight leg of wye.

RULE 505. AUTOMATIC BLOCK SYSTEM

Tracy: Signals in east end of Tracy are numbered as automatic and are under control of switch tender. When "stop" is indicated, trains must stop and not proceed until "proceed" is indicated or proceed signal is given with green flag or green light by switch tender.

Eastward movements governed by dwarf light Signals 710, 712, 714.

Westward movements from Lathrop Subdivision governed by Signal 713, the top light governs movement on main track and the lower light governs movement to hill or local yard, and dwarf light Signal 715 located on right of eastward track governs movement to all routes.

Westward freight trains stopped by Signal 717, located east of overhead crossing east of Tracy, use telephone located on this signal, call switch tender and be governed by his instructions.

Trains and engines stopped by Signal 709 may then proceed with caution if proceed signal received from yardman.

Lathrop: Trains and engines stopped by Signal 828 may apply Rule 509 only after obtaining permission of train-order operator.

RULES 510 and 776. The following block signals equipped with triangular number plate bearing the letter "P" have included in their control limits some special protective device. Absolute signals are listed as "P-A"; and Rule 776 in addition to Rule 510 must be complied with when stopped by such signals:

Eastward Signal	Protection	Westward Signal
P-A	Collision detector, highway underpass, MP 104.16 (Lodi)	P-1043

RULE 535. SPRING SWITCHES

Tracy: Spring derail on sewer lead, just west of roundhouse leads.

RULE 605. INTERLOCKING

San Joaquin River Drawbridge: Derails in eastward main track 892 feet west of lift span, and in westward main track 1208 feet east of lift span. Normally no signal operator on duty and signals and derails will be left lined for trains. A train stopped by interlocking signals may flag through interlocking limits at once, if derails and drawbridge in position for train movement.

Lathrop: East zone: Limits extend from SA signal 575 feet west of west switch of crossover to SA signal 65 feet east of east switch of crossover.

West zone: Limits extend from 360 feet west of junction switch to 340 feet east of junction switch.

South zone: Limits extend from 225 feet west of junction switch to 65 feet east of junction switch.

WP zone: Limits extend between semi-automatic signals either side of WPRR crossing.

Telephones at interlocking signals governing entrance to East, West and South zones, and in door of concrete shelter at WPRR crossing.

French Camp Tower: TSRy crossing 1.6 miles east of French Camp: Signal operator on duty 6:00 PM to 10:00 PM and 11:00 PM to 3:00 AM daily except Sundays and holidays. Signals will be left in proceed position and switch and derail to stock yard spur will be left for normal handling by trainmen when signal operator not on duty. During hours signal operator on duty, this switch will be electrically locked and controlled by signal operator.

Trains entering this track must restore switch and derail and lock same. Before leaving this track, permission must be obtained from signal operator, when on duty, and will be given in accordance with Rule 628; Whistle signal, — — — o may be used.

Engineers will sound whistle Signal 14 (m) when they wish to enter or pass through this plant when signal operator on duty.

Stockton Tower No. 2: AT&SFRy crossing, Sacramento and Taylor Streets, Stockton: Sound whistle signals as follows for:

Westward main track, o o — —,
Eastward main track, — o —,
Middle track, o — —,
Old siding, — — o o,
Gauns track, o — o,
Houser-Haines track, o o — o.

One short sound of tower siren (o) will be signal for all train movements to stop.

Two short sounds repeated several times (oo oo oo) will be signal for yard and train crews to clear the plant at once.

Stockton Tower No. 3: WPRR crossing Weber Avenue and Union St., Stockton.

Stockton Tower No. 4: WPRR crossing MP 92.3. Limits on eastward main track extend from signal 660 feet west of crossing to absolute signal at beginning of C.T.C. 900 feet east of crossing; and on westward main track from signal at end of C.T.C. 900 feet east of crossing to dwarf signal 200 feet west of crossing.

Switches and derails on Gulf Red Cedar spur and Gilmore Oil spur are hand-throw and equipped with electric lock controlled by signal operator.

Whistle signal:

For crossover, — o —.

Polk: West switch and eastward signals operated by signal operator at Elvas, and their use governed by Sacramento Division special instructions.

RULE 760. CENTRALIZED TRAFFIC CONTROL SYSTEM

Limits extend from east limit of Stockton Tower No. 4 at east crossover, to interlocking signal just west of west switch at Polk eastward and from absolute signal just east of west switch Polk to east interlocking limit at Stockton Tower No. 4 westward.

On double track between end of double track east of Akers and east interlocking limits at Stockton Tower No. 4 movements may be made in either direction on either track being governed by absolute and automatic signals. Rule 509 applicable to single track will apply on both tracks.

RULE 762. Flag protection to rear, as prescribed by Rule 99, is required by eastward trains standing, or delayed, on main track with rear of train between Signal 1122 and east switch Galt; and by westward trains standing, or delayed, on main track with rear of train between Signal 1121 and west switch.

GENERAL REGULATIONS

RULE 824. Tracy: When train stops on yard track in Hill yard not less than three hand brakes must be set on cut west of C St., and four hand brakes must be set on east end of train before engine is detached.

When train stops on yard track on Martinez line, not less than four hand brakes must be set on west end of train before engine is detached.

Stockton: When cars are cut off or left on west end of tracks in ice yard, sufficient hand brakes must be set on west end of cut to hold cars.

RULE 825. Train crews must not release brakes on outbound trains at Tracy until engine is coupled and brake pipe charged.

AIR BRAKE RULES

RULE 17. Retainers must be used on freight and mixed trains on descending grades as follows:

Toyon to ½ mile east of
Valley Spring.......1 valve for every 150 Ms in train.
Norval to Helisma.....1 valve for every 150 Ms in train.

FREIGHT TRAINS

RULE 25. Rear end test must be made immediately prior to departure from:

Toyon............All trains.

PASSENGER TRAINS

RULE 39. Running test must be made as follows:

Eastward trains on Lathrop Subdivision, leaving Tracy, Lathrop and Stockton,

Westward trains, leaving Akers, Stockton and Lathrop.

MISCELLANEOUS

1. Engines of Sierra Ry will take water from SP supply at Oakdale, using SP main track. Trains and engines must move with caution between F and G Sts., Oakdale, expecting to find main track occupied.

Emergency water supply only at Lathrop on westward track.

6. Cars must not be left on straight leg of wye, Lathrop, to block tool house or crossover.

Engines will be turned on AT&SFRy wye at Oakdale, operating over Sierra Ry main track from Oakdale to AT&SF Ry junction, being governed by current Sierra Ry timetable (copy may be secured from SP agent), and will procure clearance from Sierra Ry operator when on duty, before leaving Oakdale; and be governed by Special Rule No. 3, Sierra Ry timetable reading as follows:

> "All trains will approach yard limits of stations shown with train under full control, expecting to find main track obstructed. This does not give switching engines right over any train."

Sierra Ry switch key in phone box at SP station building, must be replaced after use. Every precaution for safety must be observed, flagging if conditions require.

10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Tracy—Brewery; Holly Sugar spur.
Mt-2, GS, F, SP, MM, AC, and Eng. 2371	Lathrop—Tracks leading to Army Supply Depot.
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Lathrop—Fresno No. 2 Track; beet track; slop track.
"	Stockton—Tracks 2 and 3 (except to pick up or set out); west end of Tracks 2, 3 and 4 in classification yard.
GS, F, SP, MM, AC	Stockton—Turntable lead.
DEP, P, TW-1, 4, 6, 8, A, Mk, F, AC, Mt, GS, SP	Stockton—West leg of Oakdale wye. (May be used by DEP, P (except P-6, 7, 12), Mk-2, 4, 5, 6 class in emergency).
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Lodi—Tracks 5 and 6; crossover between tracks 3 and 5; west end of track 5 to Walnut St.
Mt-2, GS, F, SP, MM, AC, and Eng. 2371	Lodi—Wye (no restriction on west end of wye between siding and oil column).
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Urgon—Spur.
"	Galt—Crossover between controlled siding and oil track; wye.
"	Elk Grove—Elk Grove Winery spur.
"	Florin—Florin Fruit Growers spur.
Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Polk—Tracks 1 and 2, U. S. Army Signal Depot.

Load limit (car and contents):

Tracy-Brighton	251,000 pounds
Stockton-Montpellier	210,000 pounds
Woodbridge-Kentucky House	210,000 pounds
Galt-Edwin	210,000 pounds
Edwin-Ione	169,000 pounds

When false bents are in place on bridges 135.87 and 136.64 load limit between Edwin and Ione will be 210,000 pounds.

Unless authorized by Superintendent, heavier loads must not be handled.

15. Trains must not pass switchtenders' stations at Sixth and Seventh Sts, Sacramento, without receiving signal from switchtender to proceed (green flag by day, green light by night) and must move with caution between Sacramento River bridge and Seventh Street.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description	
90.7	Stockton	Water column, westward track	Side
104.3	Lodi	Mokelumne River bridge	Side
129.0	Florin	Water tank spout	Side
110.7	Lockeford	Brick platform at Locke warehouse	Side
132.2	Carbondale	Clay shed	Side
136.7	Dagon	Sutter Creek bridge	Overhead & side

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
★On all yard tracks within city limits, Stockton	8
Through controlled sidings in C.T.C., except:	25
With DES class engine backing light	15
With other engines backing	10

★Regulated by City ordinance.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in Speed Restrictions for Engines, appearing in Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	⧫FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, TRACY TO BRIGHTON:				
MP MP				
70.70 to 71.20	10	10	10	10
71.20 to 71.75	45	30	30	30
71.75 to 77.95	60	45	45	30
77.95 to 78.35 (bridge)	40	40	40	20
78.35 to 81.39 (Lathrop, jct. Fresno line)	60	45	45	30
Thru switches to Fresno line, West Zone at Lathrop	25	25	25	25
81.39 to 87.70	55	40	40	30
87.70 to 88.70	45	30	30	30
★88.70 to 92.00 (Stockton)	20	20	20	20
92.00 to 92.30	45	30	30	30
92.30 to 95.00	55	35	35	30
95.00 to 95.01 (thru turnout)	25	25	25	20
95.01 to 102.00	65	35	35	30
102.00 to 104.00 (Lodi)	30	30	30	30
104.00 to 104.53, except:	65	35	35	30
Over bridge 104.38 with GS, F, AC, Mt-2 engines	25	25	25	25
104.53 to 131.70	65	35	35	30
131.70 to 133.20 (Brighton)	40	35	35	30

TERRITORY	PASSENGER TRAINS	⧫FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
WESTWARD, BRIGHTON TO TRACY:				
MP MP				
133.20 to 131.70	40	35	35	30
131.70 to 104.38, except:	65	35	35	30
Over bridge 104.38 with GS, F, AC, Mt-2 engines	25	25	25	25
104.38 to 104.00	65	35	35	30
104.00 to 102.00 (Lodi)	30	30	30	30
102.00 to 95.00	65	35	35	30
95.00 to 92.30	55	35	35	30
92.30 to 92.00	45	30	30	30
★92.00 to 88.70 (Stockton)	20	20	20	20
88.70 to 87.70	45	30	30	30
87.70 to 81.39 (Lathrop)	55	40	40	30
Thru switches to Fresno line, East Zone at Lathrop	25	25	25	25
81.39 to 78.35	60	45	45	30
78.35 to 77.95 (bridge)	40	40	40	20
77.95 to 71.75	60	45	45	30
71.75 to 71.20	45	30	30	30
71.20 to 70.70 (Tracy)	10	10	10	10

★Regulated by City ordinance.

Nos. 51 and 52, consisting of streamlined equipment with P-7, 8, 10, 12 or Mt class engine equipped with electro-pneumatic brakes functioning on engine and all cars, may run not to exceed 65 MPH on TANGENT TRACK where maximum speed of 60 MPH is authorized in Column 1.

No. 402 (BM) may make maximum speed of 50 MPH handling ordinary box cars, in territory where maximum freight and mixed train speed is shown as 40 MPH.

⧫Freight and Mixed trains with twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed Permitted with Certain Equipment"; scale test cars; and cars with arch bar trucks must not exceed maximum speed of 40 MPH.

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
BETWEEN STOCKTON AND MONTPELLIER:				
MP MP				
★90.95 and 91.40	8	8	8	8
91.40 and 103.58	30	30	20	20
103.58 and 103.95 (Peters)	20	20	20	20
103.95 and 140.29	30	30	20	20
BETWEEN LODI AND KENTUCKY HOUSE:				
103.51 and 121.40	25	25	15	15
121.40 and 132.30	20	20	15	15
132.30 and 139.70	15	15	15	15
139.70 and 142.84	20	20	15	15

TERRITORY	PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
BETWEEN LODI AND WOODBRIDGE:	10	10	10	10
BETWEEN GALT AND IONE:				
MP MP				
112.12 and 125.50	30	30	20	20
125.50 and 127.10	25	25	15	15
127.10 and 135.87	30	30	20	20
135.87 and 135.90 (bridge)	15	15	15	15
135.90 and 136.64	30	30	20	20
136.64 and 136.66 (bridge)	15	15	15	15
136.66 and 138.99	30	30	20	20

★Regulated by City ordinance.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Tracy and Brighton	Stockton and Montpellier	Lodi to Wallace Toyon to Macnider	Wallace to Toyon Macnider to Kentucky House	Macnider to Toyon	Valley Spring to Norval
DEP-4	6000 to 6004		....	....	....	....	....
DEP-5	6005 to 6007		....	....	....	....	....
DEP-6	6008 to 6010		....	....	....	....	....
DEF-1	6100 to 6118		....	....	....	....	....
DEF-2	6119 to 6139		....	....	....	....	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	3200					
DES-100 to 109	1300 to 1425	4500	....				
E-23	1500	3350	2300	2600	560	1050	1650
M-4	1617 to 1713	4450	3050	3450	800	1450	2200
M-6, 8	1721 to 1803, 1823 to 1825	5250	3600	4050	910	1600	2600
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500	3800	4250	970	1700	2750
M-11	1832 to 1835	5700	3950	4450	1050	1900	2900
T-1	2242 to 2271	3800	2600	2950	680	1200	1900
T-8, 9	2161 and 2178	2750	1850	2100	460	860	1350
T-23	2301 to 2310	5500	3750	4250	1000	1750	2750
T-26	2283 to 2299	4800	3300	3750	850	1550	2400
T-28, 31	2311 to 2362	6000	4150	4650	1050	1850	2950
T-32	2363 to 2370, 2372 to 2384	6150	4200	4650	1050	1850	2950
T-40	2371	6150	....	....	....	....	....
T-37	2105 and 2106	5450	3750	4250	1000	1800	2750
T-57, 58	2385 and 2386	4950	.3400	3850	910	1600	2500
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	4950	3350	3850	③850	1550	2450
P-1	2403 to 2407 and 2415	4950	....	....	....	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450	4000	4200	③930	1700	2700
P-6	2453, 2454 and 2458	6100	....	....	....	....	....
P-7	2476 and 2477	6500	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	6800					
P-8, 10	2475, 2484 to 2491	6800					
P-11	3100 to 3109	5250					
P-12	3120 to 3129	6900					
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600	4550	5150	1250	2200	3350
C-15	2505 to 2507	4250	2900	3300	800	1400	2150
C-17	2510 and 2511	5200	3600	4050	1000	1750	2650
C-18	3400 to 3409	6050	4200	4750	1150	2000	3100
C-19	3410 to 3426	6300	4350	4950	1200	2100	3200
TW-1	2900 to 2913	5050	3450	3950	950	1650	2550
TW-2, 3	2932 to 2952	4050	2800	3150	740	1300	2050
TW-4, 6	2926 to 2931 and 2957	3850	2650	3000	690	1250	1900
TW-8	2914 to 2923	5550	3850	4350	1050	1850	2800
A-3	3025, 3036, 3052 and 3057	3900	2900	3150	③660	1250	2000
A-6	3000 to 3003	4800	3550	3700	③800	1500	2350
Mk-2, 4	3201 to 3240	7650	①5100	①5800	①1350	①2550	①3800
Mk-5, 6	3241 to 3277	8450	②5800	②6600	②1550	②2850	②4300
Mk-7, 8, 9	3300 to 3324	9200	....	....	....	....	....
Mk-10	3295	7100	4900	5600	1350	2430	3650
Mk-11	3297 and 3298	6800	4700	5350	1300	2350	3500
F-1	3611 to 3652	9600	....				
F-3	3653 to 3667	11000	....				
F-4, 5	3668 to 3769	11000	....				
MM-3	3930 and 3931	12800	....				
AC-1, 2, 3	4014 to 4047	13300	....				
AC-4, 5	4100 to 4125	17300	....				
AC-6 to 12	3800 to 3811, 4126 to 4294	18300	....				
Mt-1, 3, 4, 5	4300 to 4376	9000	....				
Mt-2	4385 to 4390	9750	....				
GS-1, 2	4401 to 4415	④9600	....				
GS-3, 4, 5, 6	4416 to 4469	④10200	....				
SP-1, 2, 3	5000 to 5048	12950	....				

NOTES:

①Applies to Engines 3201, 3203 to 3206, 3211, 3213, 3214, 3224, 3227, 3229, 3236 and 3237 only.

②Applies to Engines 3241, 3247, 3251, 3253, 3255, 3259, 3266 and 3272 only.

③P-1, 3, 4, 5 and A-3, 6 Class engines not permitted to operate between Macnider and Kentucky House.

④GS Class engines not permitted in passenger service.

Between Tracy and Brighton, and between Stockton and Montpellier, in figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—LATHROP SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Kentucky House to Macnider Toyon to Valley Spring Norval to Lodi	Lodi and Woodbridge	Galt to Edwin★	Edwin to Ione★	Ione to Edwin★	Edwin to Galt★
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	....	....	....	....	....	....
DES-100 to 109	1300 to 1425	....	....	....	....	....	....
E-23	1500	3350	3740	1190	1190	4040	4040
M-4	1617 to 1713	4450	5000	1620	1620	5300	5300
M-6, 8	1721 to 1803, 1823 to 1825	5250	5850	1900	....	....	6200
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500	6200	2040	....	....	6550
M-11	1832 to 1835	5750	6450	2120	....	....	6820
T-1	2242 to 2271	3800	4200	1384	1384	4500	4500
T-8, 9	2161 and 2178	2750	3270	970	970	3270	3270
T-23	2301 to 2310	5500	6150	2000	....	....	6500
T-26	2283 to 2299	4850	5400	1740	....	....	5730
T-28, 31	2311 to 2362	6000	6800	2220	....	....	7170
T-32	2363 to 2370, 2372 to 2384	6150	6900	2260	....	....	7300
T-40	2371	....	....	....	....	....	....
T-37	2105 and 2106	5500	6100	2000	....	....	6500
T-57, 58	2385 and 2386	4950	5480	1820	....	....	5880
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	③4950	....	....	....	....	....
P-1	2403 to 2407 and 2415	....	....	....	....	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	③5450	....	....	....	....	....
P-6	2453, 2454 and 2458	....	....	....	....	....	....
P-7	2476 and 2477	....	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491	....	....	....	....	....	....
P-11	3100 to 3109	....	....	....	....	....	....
P-12	3120 to 3129	....	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600	7400	2430	....	....	7800
C-15	2505 to 2507	4250	4750	1570	1570	5050	5050
C-17	2510 and 2511	5250	5870	1950	....	....	6200
C-18	3400 to 3409	6100	6850	2270	....	....	7230
C-19	3410 to 3426	6350	7100	2360	....	....	7530
TW-1	2900 to 2913	5100	5700	1870	....	....	6000
TW-2, 3	2932 to 2952	4100	4600	1500	....	....	4800
TW-4, 6	2926 to 2931 and 2957	3850	4350	1400	1400	4600	4600
TW-8	2914 to 2923	5600	6300	2060	....	....	6650
A-3	3025, 3036, 3052 and 3057	③4150	....	....	....	....	....
-6	3000 to 3003	③4800	....	....	....	....	....
Mk-2, 4	3201 to 3240	①7500	①8400	①2720	....	....	①8800
Mk-5, 6	3241 to 3277	②8400	②9450	②3100	....	....	②10000
Mk-7, 8, 9	3300 to 3324	....	....	....	....	....	....
Mk-10	3295	7100	8000	2650	....	....	8450
Mk-11	3297 and 3298	6800	7650	2550	....	....	8100
F-1	3611 to 3652	....					
-3	3653 to 3667	....					
F-4, 5	3668 to 3769	....					
MM-3	3930 and 3931	....					
AC-1, 2, 3	4014 to 4047	....					
AC-4, 5	4100 to 4125	....					
AC-6 to 12	3800 to 3811, 4126 to 4294	....					
Mt-1, 3, 4, 5	4300 to 4376	....					
Mt-2	4385 to 4390	....					
GS-1, 2	4401 to 4415	....					
GS-3, 4, 5, 6	4416 to 4469	....					
SP-1, 2, 3	5000 to 5048	....					

NOTES:

①Applies to Engines 3201, 3203 to 3206, 3211, 3213, 3214, 3224, 3227, 3229, 3236 and 3237 only.

②Applies to Engines 3241, 3247, 3251, 3253, 3255, 3259, 3266 and 3272 only.

③P-1-3-4-5 and A-3, 6 Class engines not permitted to operate between Macnider and Kentucky House.

★Ratings between Galt and Edwin also apply between Edwin and Ione when false bents are in place on bridges 135.87 and 136.64.

From Ione to Edwin, in figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

RULE 14 (d). As specified below, — — — — o will be indication that flagman may return from west as prescribed by Rule 99:

Fresno	Trains on Pratton line,
Biola Jct.	Trains on Biola line.

RULE 14 (e). As specified below, — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Lathrop	Trains on Merced line,
Berenda	Trains on Daulton line.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
80.56	Lathrop (Tracy-Stockton line)	83.04
	" (Merced line)	94.02
109.94	Modesto	114.93
124.98	Turlock	127.32
149.55	Merced	151.42
182.67	Madera	185.38
206.32	Fresno (Pratton-Tulare line)	210.79
208.44	" (Biola-Porterville line)	208.15
199.07	" (Merced-Clovis line)	209.60

Fresno: Trains or engines will not move against current of traffic on double track, except on authority of traffic, except on authority of yardmaster. When making movements against current of traffic, trains or engines must be preceded by flagman over railway and street crossings at grade where wigwags installed, protecting crossings during movement, except where crossing watchman located.

Trains must receive proceed signal from yardman (green flag by day, green light by night) between Kern St. (east of passenger station) and Merced St. (west of passenger station).

When Signal 2046 on Pratton line, or Signal 2042 on eastward track displays stop indication train must stop, and after proceed signal received from yardman (green flag by day, green light by night) may then proceed as prescribed by Rules 509 (F) and 513.

Eastward trains via Pratton line to Fresno Yard must receive proceed signal from yardman (green flag by day, green light by night) before fouling eastward or westward main track.

RULE 103 (A). Turlock: Switching must not be done over Main and Olive Street crossings between hours of 12 Noon and 1:00 PM.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Chowchilla . . . Highway crossing on Cardwell Co. spur.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Berenda	Daulton line, for house track,
Chowchilla	Dairyland line, for house track,
Fresno Yard	End double track, for westward track,
Fresno	Pratton line, for eastward main track.

RULE 505. AUTOMATIC BLOCK SYSTEM

Lathrop: Trains and engines stopped by Signal 828 may apply Rule 509 only after obtaining permission of train-order operator.

RULE 516. Overlap posts:

Manteca (2300 ft. east of west switch) . . Eastward trains.

RULE 605. INTERLOCKING

Lathrop: East zone: Limits extend from 575 feet west of west switch of crossover to 65 feet east of east switch of crossover.

West zone: Limits extend from 360 feet west of junction switch to 340 feet east of junction switch.

South zone: Limits extend from 225 feet west of junction switch to 65 feet east of junction switch.

WP zone: Limits extend between semi-automatic signals either side of WPRR crossing.

Telephones at interlocking signals governing entrance to East, West, and South zones, and in door of concrete shelter at WPRR crossing.

Kismet Tower: AT&SFRy crossing.

Biola Jct. Limits extend on Merced line from 675 feet west of junction switch, and on Biola line from 575 feet west of junction switch, to 930 feet east of junction switch on Merced line, and to dwarf signal 290 feet east of junction switch on No. 1 drill track.

Trains and engines stopped by signals will call signal operator at train-order office Muscatel by telephone and be governed by his instructions. Telephones and instructions for hand operation of dual control switches are located in battery house at junction switch and at derail on Biola line.

Dwarf signal on 7½-foot mast on No. 1 drill track will display green aspect for movement to Merced line, yellow aspect for movement to Biola line.

AUTOMATIC INTERLOCKING

Modesto Tower: TSRy crossing, MP 114.7. When trains are stopped by signals governing the use of automatic interlocking, flagman must be sent to crossing to operate clockwork time release enclosed in box marked "SPCo" and locked with switch lock.

Release must not be operated when trains are within interlocking limits or seen or heard approaching, on intersecting line.

Two minutes after release has been operated, a red indication light will be displayed over release and home signal should display proceed indication. If, for some reason, signal cannot display proceed indication, red indication light on home signal will be displayed and this will be authority to proceed through interlocking limits.

If home signal displays stop indication and red indication light on home signal is not displayed, train may proceed over crossing as provided by Rule 663.

Instructions for operating time release are posted inside of box.

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

GENERAL REGULATIONS

RULE 827. TRAIN INSPECTION

Passenger trains making station stop at Modesto must approach at not to exceed 8 MPH to allow forward brakeman to detrain on station side where rear of train will stop. He will then make rolling inspection of train, then walk length of train on opposite side making standing inspection, giving careful attention to running gear and journal boxes and entrain on station side.

RULE 829. Turlock: City ordinance requires that highways or streets within city limits shall not be obstructed for longer than 10 minutes and that in event of fire alarm being sounded any train blocking Main St. must clear crossing immediately.

MISCELLANEOUS

1. When stopping to take water at Modesto, eastward freight trains leave train clear of L St. (second street west of passenger station), and westward trains clear of G St. (third street east of passenger station).

When stopping to take water at Merced, westward freight trains between 7:00 AM and 6:00 PM leave train east of crossing just east of freight station building.

Emergency water supply only at Lathrop on westward track.

6. Cars must not be left on straight leg of wye, Lathrop, to block tool house or crossover.

During cotton season, cars will be spotted on main track at Pierce Road crossing, one mile west of Plains, Chowchilla Branch.

10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Mt-2, GS, F, SP, MM, AC, P, and Eng. 2371	Lathrop—Tracks leading to Army Supply Depot.
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Lathrop—Fresno No. 2 track; beet track; slop track.
“	Manteca—Spreckels Sugar spur,
“	Livingston—Spur to Shed 101.
Engines 2371, 2400, 2403 to 2407, incl., 2415, P-6-7-8-10-11-12-14, Mt, GS, F, SP, MM, AC, and Mk over 210,000 pounds on drivers	Turlock—Track opposite peanut shed. Atwater—Industry track north of highway. Berenda—Corral track. Madera—Winery spur; except Mk class may operate to a point 600 feet east of switch leading to Independent Meat Co. spur.

Load limit (car and contents):

Lathrop-Fresno	251,000 pounds
Chowchilla-MP 172.5	210,000 pounds
MP 172.5-Dairyland	169,000 pounds
Berenda-Daulton	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description
134.8	Livingston	Merced River bridge . . Overhead and side

Sugar beet dump at Spreckels Sugar Beet Factory, Manteca, uncovered and care should be exercised by trainmen while working thereon.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS

	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
On Spreckels Sugar spur, Manteca	10

SPECIAL INSTRUCTIONS—MERCED SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in Speed Restrictions for Engines, appearing in Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, LATHROP TO FRESNO:				
MP MP				
Thru switches, East and West Zones, at Lathrop	25	25	25	25
On east leg of wye, Lathrop	15	15	15	15
92.83 to 93.07 (switches)	15	15	15	15
93.07 to 94.00	30	20	20	20
94.00 to 112.60	70	50	45	30
112.60 to 113.60 (Modesto)	45	30	30	30
113.60 to 114.69	65	40	40	30
114.69 to 114.70 (TSRy. crossing)	40	25	25	25
114.70 to 125.20	65	40	40	30
125.20 to 126.00	45	30	30	30
★126.00 to 126.30 (Turlock)	30	30	30	30
126.30 to 130.50	65	40	40	30
130.50 to 134.64	70	50	45	30
134.64 to 134.88 (bridge), except:	50	35	35	30
with GS, F, AC or Mt-2 engines ①	25	25	25	25
134.88 to 149.70	70	50	45	30
149.70 to 151.60 (Merced)	45	30	30	30
151.60 to 163.00	70	50	45	30
163.00 to 181.50	65	40	40	30
181.50 to 183.16	70	50	45	30
183.16 to 184.75 (Madera)	45	30	30	30
184.75 to 199.28 (Biola Jct.)	70	50	45	30
199.28 to 201.89 (Fresno Yard)	⊙40	30	30	30
201.89 to 201.93 (thru turnout)	25	25	25	20
201.93 to 204.50	⊙40	30	30	20
★204.50 to 206.50 (Fresno)	20	20	15	10
EASTWARD, BERENDA TO DAULTON:				
176.63 to 188.36	20	20	15	15
EASTWARD, CHOWCHILLA TO DAIRYLAND				
168.15 to 172.71	15	15	15	15
172.71 to 178.38	10	10	10	10

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
WESTWARD, FRESNO TO LATHROP:				
MP MP				
★206.50 to 204.50	20	20	15	10
204.50 to 199.28 (Biola Jct.)	⊙40	30	30	30
199.28 to 184.75	70	50	45	30
184.75 to 183.16 (Madera)	45	30	30	30
183.16 to 181.50	70	50	45	30
181.50 to 163.00	65	40	40	30
163.00 to 151.60	70	50	45	30
151.60 to 149.70	45	30	30	30
149.70 to 134.88	70	50	45	30
134.88 to 134.64 (bridge), except:	50	35	35	30
with GS, F, AC or Mt-2 engines ①	25	25	25	25
134.64 to 130.50	70	50	45	30
130.50 to 126.30	65	40	40	30
★126.30 to 126.00 (Turlock)	30	30	30	30
126.00 to 125.20	45	30	30	30
125.20 to 114.70	65	40	40	30
114.70 to 114.69 (TSRy. crossing)	40	25	25	25
114.69 to 113.60	65	40	40	30
113.60 to 112.60 (Modesto)	45	30	30	30
112.60 to 94.00	70	50	45	30
94.00 to 93.07	30	20	20	20
On east leg of wye, Lathrop	15	15	15	15
Thru switches, East and West Zones, at Lathrop	25	25	25	25
93.07 to 92.83 (switches)	15	15	15	15
WESTWARD, DAULTON TO BERENDA:				
188.36 to 176.63	20	20	15	15
WESTWARD, DAIRYLAND TO CHOWCHILLA:				
178.38 to 172.71	10	10	10	10
172.71 to 168.15	15	15	15	15

★Regulated by City ordinance.

①An engine of GS, F, AC or Mt-2 class must not be operated coupled with any other engine over Merced River bridge, MP 134.88.

Nos. 51 and 52, consisting of streamlined equipment with P-7, 8, 10, 12 or Mt class engine equipped with electro-pneumatic brakes functionin on engine and all cars, may run not to exceed 75 MPH on TANGENT TRACK where maximum speed of 70 MPH is authorized in Column 1.

⊙No. 52 may run not to exceed 50 MPH, MP 199.28 to MP 201.89 and from MP 201.93 to MP 204.50. No. 51 may run not to exceed 50 MPH, MP 204.50 to MP 199.28.

No. 402 (BM) may make maximum speed of 50 MPH handling ordinary box cars, in territory where maximum freight and mixed train speed is shown as 40 MPH.

♦Freight and Mixed trains with twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed Permitted with Certain Equipment"; scale test cars; and cars with arch bar trucks must not exceed maximum speed of 40 MPH.

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Lathrop and Fresno	Chowchilla and Dairyland	Berenda to Daulton	Daulton to Berenda
DEP-4	6000 to 6004	....	....	....	....
DEP-5	6005 to 6007	....	....	....	....
DEP-6	6008 to 6010	....	....	....	....
DEF-1	6100 to 6118	....	....	....	....
DEF-2	6119 to 6139	....	....	....	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	3200		....	....
DES-100 to 109	1300 to 1425	4500	....	....	....
E-23	1500	3350	3990	1500	4040
M-4	1617 to 1713	4450	5250	2040	5300
M-6, 8	1721 to 1803, 1823 to 1825	5250	6100	2400	6200
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500	6350	2550	6550
M-11	1832 to 1835	5700	③6750	2650	6820
T-1	2242 to 2271	3800	4450	1750	4500
T-8, 9	2161, and 2178	2750	3220	1240	3270
T-23	2301 to 2310	5500	③6450	2520	6500
T-26	2283 to 2299	4800	③5650	2200	5730
T-28, 31	2311 to 2362	6000	③7100	2790	7170
T-32	2363 to 2370, 2372 to 2384	6150	③7200	2830	7300
T-40	2371	6150	....	....	....
T-37	2105 and 2106	5450	③6450	2530	6500
T-57, 58	2385 and 2386	4950	③5800	2280	5880
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	4950	5850	....	....
P-1	2403 to 2407 and 2415	4950	....	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450	③6400		
P-6	2453, 2454 and 2458	6100	....	....	....
P-7	2476 and 2477	6500	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483	6800	....	....	....
P-8, 10	2475, 2484 to 2491	6800	....	....	....
P-11	3100 to 3109	5250	....	....	....
P-12	3120 to 3129	6900	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600	7750	3050	7800
C-15	2505 to 2507	4250	5000	1970	5050
C-17	2510 and 2511	5200	6150	2440	6200
C-18	3400 to 3409	6050	7180	2830	7230
C-19	3410 to 3426	6300	7480	2950	7530
TW-1	2900 to 2913	5050	5950	2350	6000
TW-2, 3	2932 to 2952	4050	4750	1880	4800
TW-4, 6	2926 to 2931 and 2957	3850	4550	1770	4600
TW-8	2914 to 2923	5550	6600	2590	6650
A-3	3025, 3036, 3052 and 3057	3900	③4600	....	....
A-6	3000 to 3003	4800	③5650	....	....
Mk-2, 4	3201 to 3240	7650	①③8800	①3430	①8800
Mk-5, 6	3241 to 3277	8450	②③9900	②3900	②10000
Mk-7, 8, 9	3300 to 3324	9200	....	....	....
Mk-10	3295	7100	③8350	3320	8450
Mk-11	3297 and 3298	6800	③8000	3190	8100
F-1	3611 to 3652	9600			
F-3	3653 to 3667	11000			
F-4, 5	3668 to 3769	11000			
MM-3	3930 and 3931	12800			
AC-1, 2, 3	4014 to 4047	13300			
AC-4, 5	4100 to 4125	17300			
AC-6 to 12	3800 to 3811, 4126 to 4294	18300			
Mt-1, 3, 4, 5	4300 to 4376	9000			
Mt-2	4385 to 4390	9750			
GS-1, 2	4401 to 4415	④9600			
GS-3, 4, 5, 6	4416 to 4469	④10200			
SP-1, 2, 3	5000 to 5048	12950			

NOTES:

①Applies to Engines 3201, 3203 to 3206, 3211, 3213, 3214, 3224, 3227, 3229, 3236 and 3237 only.

②Applies to Engines 3241, 3247, 3251, 3253, 3255, 3259, 3266 and 3272 only.

③Not permitted between Ash and Dairyland.

④GS Class engines not permitted in passenger service.

Between Lathrop and Fresno, in figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULE 14 (d). As specified below, — — — — o will be indication that flagman may return from west as prescribed by Rule 99:

Newark and Santa Clara	Trains on Elmhurst-Santa Clara line,
Niles	Trains on Elmhurst-San Jose line.

RULE 14 (e). As specified below, — — — — — — will be indication that flagman may return from east as prescribed by Rule 99:

Elmhurst-Newark-Santa Clara	Trains on Elmhurst-Santa Clara line.
Niles	Trains on Milpitas line.

RULE 14 (l). Whistle signal must be sounded and bell kept ringing when entering or leaving the Sugar Co.'s yard at Alvarado or approaching their road crossing.

RULE 14 (m). Whistle will not be sounded one mile before reaching stations between:

Oakland Pier and Elmhurst.

RULES 17 and 17 (C). Headlights of engines standing at end of wharf at Oakland Pier must be extinguished when steamers are entering slip. Headlights of eastward trains must be extinguished while standing at Oakland Pier and dimmed until Oakland Pier Tower has been passed.

RULE 21 (C). Passenger engines to handle trains from Oakland Pier may display indicators before leaving West Oakland.

Indicators of engines on trains arriving Oakland Pier may be displayed until engine reaches roundhouse at West Oakland, and must be removed immediately on arrival at delivery track.

RULE 93. When freight cars are moved from one point to another on main track within Oakland yard limits at night, a red light must be displayed on rear of rear car.

Yard limits in which the provisions of Rule 93 will apply, are established at the following points:

West MP		East MP
	Oakland (Martinez line)	17.35
	" (Niles line)	15.82
	" (Alvarado line)	14.01
14.02	Mulford	16.39
17.75	Hayward	21.69
80.70	Tracy (Martinez-Los Banos line)	85.64
69.19	" (Niles-Lathrop line)	74.37
24.44	Redwood Jct. (San Mateo-Newark line)	28.22
	" (Palo Alto line)	27.17
35.20	Newark (Centerville-Redwood Jct. line)	38.51
28.79	" (Alvarado-Santa Clara line)	32.25
41.29	Niles (Tracy-Redwood Jct. line)	30.67
26.60	" (Hayward-Milpitas line)	30.95
41.70	Eliot	45.40
63.25	" (San Ramon line)	
45.89	Livermore	48.66
54.03	Altamont	55.64
43.47	San Jose (Palo Alto-Coyote line)	56.00
44.85	" (Milpitas line)	
43.74	" (Alviso line)	

Tracy: Eastward trains from Niles line must receive proceed signal from yardman before passing Signal 704.

RULE 103 (A). **Oakland:** When moving against current of traffic flagman must protect crossing before moving over 5th, 19th, 29th Aves., and High St.

Member of crew must protect traffic over Winton Ave. crossings on drill track and corral track, Hayward, before movement is made.

Public Utilities Commission orders require that trains and engines must stop, and member of crew must protect traffic on the following street or highway crossings before movement is made:

Mulford......Crossing Maitland Drive on Airport drill.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Elmhurst...End of double track, for eastward track;
Alvarado line, for Niles line;
Stonehurst line, for house track extension.

Switches handled by operator for trains.

Whistle signals:

For Alvarado line, o — —.
For Niles line, — o —.

Niles........Niles Tower line, for Elmhurst-Livermore line.

Westward trains from Niles Tower line intending to use crossover west of station building must remain clear of crossover until both switches have been lined, then be governed by indication in Signal 287.

Tracy......Niles line, for Martinez line.
Tracy.......End double track, for eastward track.
Tracy.......Los Banos line, for Niles line.

RULE 505. AUTOMATIC BLOCK SYSTEM

Elmhurst: Signals are numbered as automatic and ar under control of train-order operator. When signals display stop indication, trains must stop, and not proceed until signal displays proceed indication, or proceed signal is given by operator with yellow flag by day or yellow light by night.

Tracy: Signals in east end of Tracy are numbered as automatic and are under control of switch tender. When "stop" is indicated, trains must stop and not proceed until "proceed is indicated or proceed signal is given with green flag or green light by switch tender.

RULE 510. Following block signals equipped with a triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
	Spring switch, Shinn	P-423
P-526	Rock slide detector fence, MP 53.5	P-543
P-386	Collision detector, bridges 39.26 and 39.44 (Alviso)	
	Collision detector, bridge 39.26 (Alviso)	P-393
	Collision detector, bridge 39.44 (Alviso)	P-413

RULE 516. Overlap posts:

Hayward (3600 feet east of Signal 187)	Westward trains.
Livermore (1275 feet east of Signal 473)	Westward trains.
Livermore (850 feet west of Signal 470)	Eastward trains.

RULE 535. SPRING SWITCHES

Spring switches not equipped with facing point locks are located as follows:

Location		Normal Position
Redwood Jct.	End double track	Westward track
Shinn	East end siding	Main track

Spring switches are also located on other tracks as follows:

West Oakland: Two on incoming engine leads, east of roundhouse; two on outgoing freight engine lead, near tin shop, and one on outgoing engine lead west of roundhouse.

Sather: Tail track to Hutchison drill.

Oakland Pier: West end of tracks 4, 5 and 6.

Tracy: Spring derail on sewer lead, just west of roundhouse leads.

RULE 605. INTERLOCKING

On double track within Oakland yard limits signal operator may arrange to move trains from one tower to another against the current of traffic, after having an understanding by telephone for each movement. Before moving trains against current of traffic signal operator must know that track to be used is clear of opposing engines and trains.

Oakland Pier: Limits extend eastward to automatic Signal 40 on eastward main track and to home signal 450 feet east of Signal 40 on westward main track on Martinez line, and to automatic Signal 42 on both main tracks on Niles line, and on yard tracks 9 and 10 to Signal 44; and on yard tracks 11, 12 and 13 to home signal 175 feet east of Maritime overpass.

When siren whistle is sounded, all movement must stop and await proper signal.

The last signal governing movement into any track except tracks 17, 18, 19 and 20 is a two-arm dwarf signal. When home signal displays proceed indi cation, and approach signal displays yellow aspect, it indicates that movement is to be made into a track occupied by engines or cars. Responsibility for collision will rest with train or engine entering.

Niles Tower: Limits extend from dwarf signal on Niles line and signal on Tracy line 1685 feet from WPRR crossing, to Signal 300 on Milpitas line and to Signal P-423 on Centerville line, and also includes Milpitas-Centerville leg of wye.

When eastward interlocking signal just east of east switch Shinn displays stop indication, trains must stop to clear fouling point of east switch Shinn siding and call signal operator for instructions.

Junction switch at Niles Jct. is remotely controlled by signal operator at Niles Tower. When necessary to hand-throw this switch permission must be obtained from signal operator and switch must be cranked over. Instructions for operation posted on crank box opposite switch.

Derail near east end of yard Track No. 1 at Niles is electrically locked and under control of signal operator at Niles Tower. Instructions for operation by hand when authorized by signal operator are posted inside of lock box.

Whistle signals:

To San Jose, o — —,
To Centerville, — o —,
To Niles, o — o,
To Tracy, — o — o,
Engines from trains to Niles for water, o — o —.

Newark: Limits extend from signal 50 feet east of wye switch on Centerville line to signal 1150 feet east of wye switch on Santa Clara line, and to signal 650 feet west of wye switch on Elmhurst line, and to dwarf signals on Redwood Jct. line near Newark station building.

Switches and derails at west end of extension of Santa Clara line siding and east end of house track are electrically locked and controlled by signal operator. Instructions for operation posted inside of lock box.

Whistle signals:

To Santa Clara, o — —,
To Santa Clara line siding, o — — o,
To Santa Clara line siding extension, — — o,
To Redwood Jct., — o — o,
To Dumbarton line siding, — o — o o,
To Centerville, — o —,
To Elmhurst, o — o.

Newark Slough drawbridge, MP 34.53 on Redwood Jct. line: No signal operator regularly on duty. Signals and derails lined for train movement except when signal operator occasionally on duty. If signals display stop indication and derails properly lined, train may follow flagman through interlocking limits.

San Francisco Bay drawbridge, MP 32.53 on Redwood Jct. line: Derails in main track within interlocking limits east and west of draw span.

West Oakland (First and Cedar Sts.): Limits on Niles line extend from Signal Bridge 110 to Signal Bridge 112. Limits on eastward main track on Martinez line extend from signal 500 feet west of freight lead crossing to 1700 feet east of freight lead crossing. Limits on westward main track on Martinez line extend from 1600 feet east of freight lead crossing to 450 feet east of Signal 40. Limits on eastward and westward freight leads extend from westward signals 2000 feet east of Martinez line main track crossing to Signal Bridge 112 on Niles line, and to westward signals on passenger yard leads 40, 50 and 60.

Magnolia Tower (First and Chestnut Sts.): Limits extend on eastward main track from signal 1600 feet west of WPRR crossing to dwarf signal 500 feet east of WPRR crossing, and on westward main track from signal 500 feet east of WPRR crossing to dwarf signal 480 feet west of crossing.

Fruitvale: Limits on main track extend from Signal Bridge 123 to Signal Bridge 127 on westward track, and to westward dwarf signal 680 feet west of Signal Bridge 127 on eastward track.

Radum: Limits on main tracks extend from home signal at west wye switch to home signal at east wye switch on Niles-Tracy line, and to home signal at wye switch on Radum-San Ramon line.

Interlocking signals for Niles-Tracy line and for WPRR main track will normally display proceed indication for both directions.

If a train on Niles-Tracy line is stopped by interlocking signal when no signal operator on duty, train may flag through interlocking limits.

GENERAL REGULATIONS

RULE 824. Tracy: When train stops on yard track in Hill yard not less than three hand brakes must be set on cut west of C St., and four hand brakes must be set on east end of train before engine is detached.

RULE 825. Train crews must not release hand brakes on outbound trains at Tracy until engine is coupled and brake pipe is charged.

Engines may operate over live rail of track scale at Tracy, not exceeding 5 MPH.

RULE 827. Trains containing carloads of rock, sand or gravel from Eliot must be given inspection as follows:

Eastward—Cayley,
Westward—Farwell.

AIR BRAKE RULES

RULE 2. Running test must be made on engines immediately after being detached from trains arriving Oakland Pier.

RULE 17. Retainers must be used on freight and mixed trains as follows:

With 20 or more cars, and tonnage averaging over 150 Ms per operative brake, use 10 retainers on head end of train, or more if requested by engineer, Altamont to Midway.

FREIGHT TRAINS

RULE 25. Rear end test must be made immediately prior to departure from:

Altamont............Trains that stop.

Freight trains may pass Altamont without stopping for rear end test if proceed signals are given by trainmen after complying with Air Brake Rule 4. Speed must be reduced to 8 MPH. Helper engineers will reduce working steam sufficiently in advance so that lead engineer may control speed by gravity.

PASSENGER TRAINS

RULE 39. Running test must be made as follows:

Westward trains for Oakland Pier, immediately after passing Magnolia Tower.

Equipment being handled between West Oakland and Oakland Pier, as soon as practicable after starting.

Eastward and westward trains at Altamont.

MISCELLANEOUS

10. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Ravenswood—Spurs.
“	Newark—Hillard, Leslie and Morton Salt spurs; West Vaco Chemical spur.
Mk-7-8-9, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Alvarado—Sugar spurs.
Mk, Mt, GS, F, SP, MM, AC, P, and Eng. 2371	Alviso—Cannery spur; Shell spur.
“	Agnew—Distillery spur.

Load limit (car and contents):

Redwood Jct.-Tracy	251,000 pounds
Oakland-San Jose via Niles	251,000 pounds
Elmhurst-Santa Clara	251,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	At or Near	Description	
28.9	Henderson	Highway underpass	Side
32.5	Dumbarton	San Francisco Bay drawbridge	Side
34.5	Dumbarton	Newark Slough drawbridge	Side
42.9	Niles Jct	Highway underpass	Side
30.8	Dresser	Alameda Creek bridge	Side
31.5	Farwell	Alameda Creek bridge	Overhead and side
38.3	Pleasanton	WPRR overhead bridge	Overhead
55.4	Altamont	Highway overhead bridge	Overhead and side
57.9	Altamont	Tunnel	Side
18.2	Lorenzo	San Lorenzo Creek bridge	Overhead and side
24.2	Halvern	WPRR overhead bridge	Overhead
29.4	Niles	Highway underpass	Side
3.5	Oakland Pier	Posts supporting trainshed	Side
36.2	Drawbridge	Warm Springs Slough bridge	Side
36.8	Drawbridge	Coyote Creek bridge	Side
32.8	Irvington	Gravel chute over house track	Overhead
29.4	Niles Tower	Street underpass	Side

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except:	15
Through slip switches	10
Through turnouts on other than sidings	10
On branches	10
Through all sidings, yard tracks and other tracks with engine running backward	10
Ravenswood, on spur	8

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains in territory shown below is subject to further restrictions applicable to engines in the train as shown in Speed Restrictions for Engines, appearing in Special Instructions for All Subdivisions. Speed must be further reduced as prescribed by speed boards, except as specifically authorized by Special Instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
EASTWARD, REDWOOD JCT. TO TRACY:				
MP MP				
26.22 to 27.50	35	35	35	20
27.50 to 27.59 (Turnout)	15	15	15	15
27.59 to 31.51	50	40	40	20
31.51 to 33.00 (bridge) ①	30	30	30	20
3.00 to 34.44	50	40	40	20
34.44 to 34.59 (bridge)	20	20	20	20
34.59 to 35.20	50	40	40	20
35.20 to 38.51	40	25	25	20
38.51 to 42.23	50	40	40	20
42.23 to 43.00–29.60 (Niles Jct.)	15	15	15	15
29.60 to 37.10	25	25	25	20
37.10 to 41.70	35	35	35	20
41.70 to 45.40	20	20	20	20
45.40 to 46.10	35	35	35	20
★46.10 to 47.60 (Livermore)	25	20	20	20
47.60 to 52.00	35	35	35	20
52.00 to 63.00	25	25	25	20
63.00 to 70.70	35	35	35	20
70.70 to 71.20 (jct. Los Banos line)	10	10	10	10
EASTWARD, NILES TO SAN JOSE YARD:				
29.20 to 29.75	15	15	15	15
29.75 to 44.85, except:	40	25	25	20
with GS, F, AC, Mt class engines	15	15	15	15
44.85 to 47.70 (San Jose Yard)	15	15	15	15
EASTWARD, OAKLAND PIER TO SANTA CLARA:				
3.50 to 4.80	15	15	15	15
4.80 to 5.93	30	30	30	30
5.93 to 5.94 (WPRR crossing)	20	20	20	20
5.94 to 6.20	30	30	30	30
★6.20 to 7.20 (Market St. to Oak St.)	15	15	15	15
7.20 to 10.50	30	30	30	30
10.50 to 13.45	25	25	25	25
13.45 to 13.47 (junction switch)	15	15	15	15
3.47 to 13.70 (curve)	35	25	25	25
13.70 to 14.58, except:	55	35	35	30
with GS or Mt class engines	45	35	35	30
14.58 to 28.79, except:	60	40	40	30
with GS or Mt class engines	45	40	40	30
28.79 to 32.30 (Newark)	40	25	25	15
32.30 to 36.00	60	40	40	30
36.00 to 36.87 (bridges)	25	25	25	25
6.87 to 39.00	60	40	40	30
39.00 to 40.10 (curves)	40	35	35	30
40.10 to 43.70	60	40	40	30
43.70 to 44.80 (Santa Clara)	50	35	35	20
EASTWARD, ELMHURST TO NILES JCT.:				
13.45 to 13.47 (junction switch)	15	15	15	15
13.47 to 14.70	25	25	25	25
Over Davis St., San Leandro	15	15	15	15
14.70 to 21.40 ①	25	25	25	25
21.40 to 25.40	40	40	40	25
25.40 to 29.60 (Niles Jct.)	25	25	25	25

TERRITORY	PASSENGER TRAINS	♦FREIGHT AND MIXED	LIGHT ENGINES	
			RUNNING FORWARD	RUNNING BACKWARD
Column:	1	2	3	4
WESTWARD, TRACY TO REDWOOD JCT.:				
MP MP				
71.20 to 70.70	10	10	10	10
70.70 to 63.00	35	35	35	20
63.00 to 52.00	25	25	25	20
52.00 to 47.60	35	35	35	20
★47.60 to 46.10 (Livermore)	25	20	20	20
46.10 to 45.40	35	35	35	20
45.40 to 41.70	20	20	20	20
41.70 to 37.10	35	35	35	20
37.10 to 29.60–43.00 (Niles Jct.)	25	25	25	20
43.00 to 42.23	15	15	15	15
42.23 to 38.51	50	40	40	20
38.51 to 35.20	40	25	25	20
35.20 to 34.59	50	40	40	20
34.59 to 34.44 (bridge)	20	20	20	20
34.44 to 33.00	50	40	40	20
33.00 to 31.51 (bridge) ①	30	30	30	20
31.51 to 27.59	50	40	40	20
27.59 to 27.50 (turnout)	15	15	15	15
27.50 to 26.22 (Redwood Jct.)	35	35	35	20
WESTWARD, SAN JOSE YARD TO NILES:				
47.70 to 44.85	15	15	15	15
44.85 to 29.75, except:	40	25	25	20
with GS, F, AC, Mt class engines	15	15	15	15
29.75 to 29.20 (Niles)	15	15	15	15
WESTWARD, SANTA CLARA TO OAKLAND PIER:				
44.80 to 43.70	50	35	35	20
43.70 to 40.10	60	40	40	30
40.10 to 39.00 (curves)	40	35	35	30
39.00 to 36.87	60	40	40	30
36.87 to 36.00 (bridges)	25	25	25	25
36.00 to 32.30	60	40	40	30
32.30 to 28.79 (Newark)	40	25	25	15
28.79 to 14.58, except:	60	40	40	30
with GS or Mt class engines	45	40	40	30
14.58 to 13.70, except:	55	35	35	30
with GS or Mt class engines	45	35	35	30
13.70 to 13.47 (curve)	35	25	25	25
13.47 to 13.45 (junction switch)	15	15	15	15
13.45 to 10.50	25	25	25	25
10.50 to 7.20	30	30	30	30
★7.20 to 6.20 (Oak St. to Market St.)	15	15	15	15
6.20 to 5.94	30	30	30	30
5.94 to 5.93 (WPRR crossing)	20	20	20	20
5.93 to 4.80	30	30	30	30
4.80 to 3.50 (Oakland Pier)	15	15	15	15
WESTWARD, NILES JCT. TO ELMHURST:				
29.60 to 25.40	25	25	25	25
25.40 to 21.40	40	40	40	25
21.40 to 14.70 ①	25	25	25	25
Over Davis St., San Leandro	15	15	15	15
14.70 to 13.47	25	25	25	25
Thru junction switch, MP 13.47	15	15	15	15

★Regulated by City ordinance.

①An engine of GS, F, AC or Mt-2 class must not be operated coupled with any other engine over Alameda Creek bridge 31.56 west of Farwell nor over San Lorenzo Creek bridge 18.16 east of Lorenzo.

Trains must not exceed 20 MPH when passing other trains being serviced between Cedar and Kirkham Sts., Oakland.

No. 335 (CMW), No. 336 (CME), No. 444 (CCM) and No. 402 (BM) may make maximum speed of 50 MPH handling ordinary box cars, in territory where maximum freight and mixed train speed is shown as 40 MPH.

♦Freight and Mixed trains with twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed Permitted with Certain Equipment"; scale test cars; and cars with arch bar trucks must not exceed maximum speed of 40 MPH.

SPECIAL INSTRUCTIONS—NILES SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Oakland and Santa Clara	Oakland and San Jose Yard via Niles	Niles and Redwood Jct.	Tracy to Niles	Niles to Tracy
DEP-4	6000 to 6004	....	....	....	....	....
DEP-5	6005 to 6007	....	....	....	....	....
DEP-6	6008 to 6010	....	....	....	....	....
DEF-1	6100 to 6118	....	....	....	....	....
DEF-2	6119 to 6139	....	....	....	....	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	3200	1950	3200	800	850
DES-100 to 109	1300 to 1425	4500	3100	4500	1250	1350
E-23	1500	3350	2600	4000	1000	1050
M-4	1617 to 1713	4450	3450	5250	1400	1500
M-6, 8	1721 to 1803, 1823 to 1825	5250	4100	6150	1650	1750
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	5500	4300	6500	1750	1850
M-11	1832 to 1835	5700	4450	6800	1800	1900
T-1	2242 to 2271	3800	2950	4500	1150	1250
T-8, 9	2161 and 2178	2750	2100	3250	830	880
T-23	2301 to 2310	5500	4300	6450	1750	1850
T-26	2283 to 2299	4800	3750	5550	1500	1600
T-28, 31	2311 to 2362	6000	4700	7100	1900	2000
T-32	2363 to 2370, 2372 to 2384	6150	4800	7100	1950	2050
T-40	2371	6150	4800	7100	1950	2050
T-37	2105 and 2106	5450	4250	6500	1700	1800
T-57, 58	2385 and 2386	4950	3850	5850	1550	1650
P-1, 3, 5	2408, 2411, 2412, 2417, 2423, 2425 to 2433, 2437 to 2452, 2459 and 2460	4950	3850	5700	1500	1600
P-1	2403 to 2407 and 2415	4950	4150	5700	1500	1600
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	5450	4550	6250	1650	1750
P-6	2453, 2454 and 2458	6100	4750	7050	1900	2000
P-7	2476 and 2477	6500	5050	7750	2050	2150
P-8, 10	2461 to 2474, 2478 to 2483	6800	5300	7950	2050	2200
P-8, 10	2475, 2484 to 2491	6800	5700	7950	2050	2200
P-11	3100 to 3109	5250	4100	6150	1650	1750
P-12	3120 to 3129	6900	5350	8100	2100	2200
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	6600	5150	7850	2100	2200
C-15	2505 to 2507	4250	3300	5050	1350	1400
C-17	2510 and 2511	5200	4050	6200	1700	1800
C-18	3400 to 3409	6050	4750	7200	1950	2050
C-19	3410 to 3426	6300	4950	7500	2000	2150
TW-1	2900 to 2913	5050	3950	6000	1600	1700
TW-2, 3	2932 to 2952	4050	3150	4800	1250	1350
TW-4, 6	2926 to 2931 and 2957	3850	3000	4600	1200	1250
TW-8	2914 to 2923	5550	4350	6600	1750	1850
A-3	3025, 3036, 3052 and 3057	3900	3300	4400	1150	1200
A-6	3000 to 3003	4800	4050	5400	1450	1550
Mk-2, 4	3201 to 3240	7650	5950	9100	2400	2550
Mk-5, 6	3241 to 3277	8450	6600	9950	2700	2850
Mk-7, 8, 9	3300 to 3324	9200	7200	10900	2950	3150
Mk-10	3295	7100	5550	8450	2300	2400
Mk-11	3297 and 3298	6800	5300	8050	2200	2300
F-1	3611 to 3652	9600	7500	11400	3050	3250
F-3	3653 to 3667	11000	8600	13100	3550	3750
F-4, 5	3668 to 3769	11000	9150	13100	3550	3750
MM-3	3930 and 3931	12800	10000	15200	3950	4300
AC-1, 2, 3	4014 to 4047	13300	10400	15800	4300	4550
AC-4, 5	4100 to 4125	17300	13500	18500	5600	5950
AC-6 to 12	3800 to 3811, 4126 to 4294	18300	14300	18500	5900	6200
Mt-1, 3, 4, 5	4300 to 4376	9000	7450	10550	2800	3000
Mt-2	4385 to 4390	9750	7600	11500	3050	3250
GS-1, 2	4401 to 4415	9600	7800	11250	3000	3150
GS-3, 4, 5, 6	4416 to 4469	10200	8000	12000	3100	3300
SP-1, 2, 3	5000 to 5048	12950	10150	15350	4150	4400

Between Oakland and Santa Clara, Oakland and San Jose Yard, and Niles and Redwood Jct., in figuring tonnage of train, add 6 Ms for each empty or underloaded car of less than 45 Ms, and 3 Ms for each such car of 45 to 55 Ms; and between Tracy and Niles add 3 Ms for each such car of 55 Ms or less.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

DIVISION MILEAGE

MAIN LINES

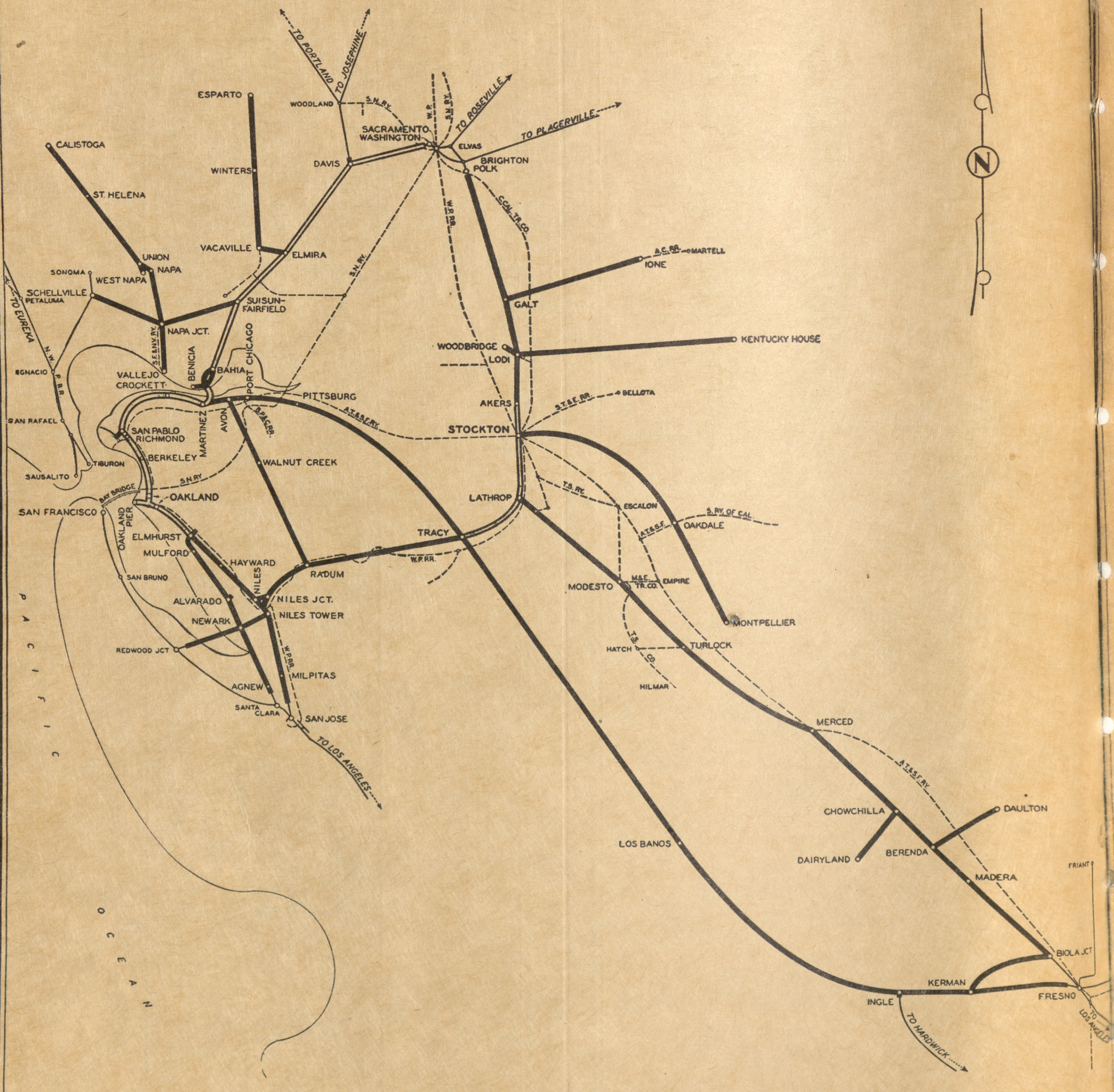
		First Track	Second Track	Miles
Oakland Pier to Washington	C. P. Ry	1.01	1.01	
	S. P. R. R.	86.20	86.33	
Davis to End of Division	S. P. R. R.	1.53		
Martinez to Tracy	S. P. R. R.	47.61	.96	
Oakland Pier to Tracy via Niles	C. P. Ry	66.97	9.17	
Tracy to Polk	C. P. Ry	60.74	23.85	
Tracy to Fresno via Kerman	S. P. R. R.	124.18		
Lathrop to Biola Jct.	C. P. Ry	106.45		
Elmhurst to Santa Clara	S. P. Co	30.26		
Redwood Jct. to Niles Tower	C. P. Ry	14.85		
Niles to San Jose	C. P. Ry	16.08		
Kerman to Biola Jct.	S. P. R. R.	14.52		
Total		570.40	121.32	
Total Main Lines				691.72

BRANCHES

		First Track	Second Track	Miles
Berenda—Berenda to Daulton	S. P. R. R.	11.73		
Chowchilla—Chowchilla to Dairyland	S. P. Co	10.23		
Ione—Galt to Ione	S. P. R. R.	26.87		
Lodi—Lodi to Woodbridge	S. P. R. R.	2.59		
Lodi to Valley Spring	S. P. R. R.	26.67		
Valley Spring to Kentucky House	S. P. Co	12.65		
Madera—Madera to end of Branch	S. P. R. R.	3.93		
Napa—Suisun—Fairfield to Calistoga	S. P. R. R.	47.34		
Oakdale—Stockton to Montpellier	C. P. Ry	.10		
	S. P. R. R.	49.23		
Riverdale—Ingle to end of Division	S. P. R. R.	.25		
San Pablo—San Pablo to Richmond Transfer	S. P. R. R.	1.70		
San Ramon—Avon to Radum	S. P. R. R.	29.85		
Schellville—Napa Junction to Schellville	S. P. R. R.	10.42		
S. P. R. R.—	N. W. P. R. R.	.88		
Stonehurst—Elmhurst to Stonehurst	C. P. Ry	.75		
Union—Union to West Napa	S. P. R. R.	1.87		
Vallejo—Napa Junction to Vallejo	S. P. R. R.	7.13		
Winters—Elmira to Esparto	S. P. R. R.	30.73		
Total Branches				274.92
Total Western Division				966.64

SPEED TABLE

TIME PER MILE	MILES PER HOUR
36″	100
37″	97.3
38″	94.7
39″	92.3
40″	90
41″	87.8
42″	85.7
43″	83.7
44″	81.8
45″	80
46″	78.3
47″	76.6
48″	75
49″	73.5
50″	72
51″	70.6
52″	69.2
53″	67.9
54″	66.7
55″	65.5
56″	64.3
57″	63.2
58″	62.1
59″	61
1′00″	60
1′01″	59
1′02″	58.1
1′03″	57.1
1′04″	56.2
1′05″	55.4
1′06″	54.5
1′07″	53.7
1′08″	52.9
1′09″	52.2
1′10″	51.4
1′11″	50.7
1′12″	50
1′13″	49.3
1′14″	48.6
1′15″	48
1′16″	47.4
1′17″	46.8
1′18″	46.2
1′19″	45.6
1′20″	45
1′25″	42.4
1′30″	40
1′35″	37.9
1′40″	36
1′45″	34.3
1′50″	32.7
1′55″	31.3
2′00″	30
2′15″	26.7
2′30″	24
2′45″	21.8
3′00″	20
3′30″	17.1
4′00″	15
5′00″	12
6′00″	10
7′00″	8.6
7′30″	8
8′00″	7.5
10′00″	6


TO PORTLAND
TO JOSEPHINE
ESPARTO
WOODLAND
S.N.RY.
W.P.
S.N.RY.
TO ROSEVILLE
TO PLACERVILLE
SACRAMENTO
WASHINGTON
ELVAS
BRIGHTON
POLK
CALISTOGA
DAVIS
WINTERS
ST. HELENA
W.P.RR.
C.CAL.TR.CO.
N
VACAVILLE
ELMIRA
UNION
NAPA
SONOMA
WEST NAPA
A.C.RR.
MARTELL
IONE
S.N.RY.
SCHELLVILLE
PETALUMA
TO EUREKA
SUISUN-
FAIRFIELD
GALT
NAPA JCT.
S.F.&N.V.RY.
WOODBRIDGE
LODI
KENTUCKY HOUSE
N.W.P.R.R.
IGNACIO
BENICIA
PORT CHICAGO
BAHIA
VALLEJO
CROCKETT
PITTSBURG
AKERS
S.T.&E.RR.
BELLOTA
SAN RAFAEL
MARTINEZ
AVON
A.T.&S.F.RY.
STOCKTON
SAN PABLO
RICHMOND
B.P.&C.RR.
BERKELEY
TIBURON
WALNUT CREEK
SAUSALITO
S.N.RY
BAY BRIDGE
OAKLAND
T.S.RY.
LATHROP
SAN FRANCISCO
OAKLAND PIER
ESCALON
S.RY. OF CAL.
ELMHURST
TRACY
A.T.&S.F.
OAKDALE
MULFORD
HAYWARD
NILES
RADUM
W.P.RR.
SAN BRUNO
MODESTO
M.&E.TR.CO.
EMPIRE
ALVARADO
NILES JCT.
NILES TOWER
NEWARK
MONTPELLIER
REDWOOD JCT
HATCH
T.S.CO.
TURLOCK
W.P.RR.
MILPITAS
HILMAR
AGNEW
SANTA CLARA
SAN JOSE
MERCED
TO LOS ANGELES
PACIFIC
A.T.&S.F.RY.
CHOWCHILLA
DAULTON
LOS BANOS
DAIRYLAND
BERENDA
MADERA
FRIANT
OCEAN
BIOLA JCT
KERMAN
FRESNO
INGLE
TO LOS ANGELES
TO HARDWICK

WESTERN DIVISION